





The Professional Video SourceBook

Section 1a

CCD CAMERAS

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For Section 1A, CCD Cameras
use Quick Dial #: 821

MN-400

One-Piece High Resolution Color Micro Camera

Amazingly small, the MN400 goes places larger cameras would never fit. Just 3" long and 3/4" in diameter, it has a 1/2" CCD with 410,000 pixels, and uses the entire variety of Elmo micro and macro lenses and accessories. Plus, no control unit is necessary for operation (however one is available if special situations require it). With broadcast quality images, reliable industrial quality, and size so small it can be placed almost anywhere, the MN-400 is ideal for aviation, military, nuclear, sports, medical research, manufacturing processes or covert surveillance.

- ◆ High speed shutter can stop motion down to an impressive 1/100,000 second.
- ◆ White balance can be auto or selected among the preset values.
- ◆ Auto Tracing White Balance, Auto Gain Control, and has an internal sync system for integrating with other camera systems.



- ◆ Captures video with over 480 horizontal lines of resolution and 50 dB S/N ratio.

MN-400 One-Piece High Resolution Color Micro Camera (Mfr # 9754 • B&H # ELMN400).....**1,049.95**

UN43H • MN43H • ME421E/R • CN43H

Remote-Head CCD Camera Systems

Elmo's remote-head camera systems offer four types of high-resolution camera head to suit many different applications. These include the Ultra-Micro UN43H, at 12mm one of the thinnest CCD cameras available today. The MN43H, the best cost performance miniature camera (only 17mm in diameter), and the CN43H, which can be used with most C-mount lenses. Each of the heads is used with the CC431E Camera Control Unit (CCU). The ME421E/R are monochrome cameras and include the CCU.

UN43H (Mfr # 97449 • B&H # ELUN43H)

12mm ultra-micro camera. Camera head weighs only 0.6 oz. 1/3" CCD with 410,000 pixels delivers over 470 lines of horizontal resolution. Low sensitivity of 3.5 lux (f/1.6). Used with the CC431E, camera cables up to 98' can be used. A variety of optional 12mm lenses are available



.....**839.95**

MN43H (Mfr # 97429 • B&H # ELMN43H)

17mm micro camera. The head weighs only 0.6 oz. 1/2" CCD with 410,000 pixels delivers over 470 lines of horizontal resolution. Low sensitivity of 5 lux (f/1.6). Used with the CC431E, camera cables up to 177' can be used. A variety of optional 17mm lenses are available



.....**579.95**

ME421E/ME421R

17mm micro monochrome cameras with 1/2" 410,000 pixel CCDs deliver 570 lines of horizontal resolution and low light sensitivity of 1.8 lux. Camera heads weigh only 0.56 oz. Full synchronization system including one-pulse trigger mode. Used with the supplied CC431E, camera cables up to 98' can be used. A variety of optional 17mm lenses are available. Otherwise the same, the ME421R has no I/R cut filter.



CN43H (Mfr # 97439 • B&H # ELCN43H)

1 1/4" x 1/2" x 1 1/16" compact camera head weighing 2.8 oz. 1/2" CCD with 410,000 pixels. Accepts C-mount lenses. Used with the CC431E, camera cables up to 177' can be used.....



.....**519.95**

CC431E

Camera Control Unit (CCU)

The CC431E accepts the UN43H, MN43H and CN43H camera heads without requiring readjustment. It features on-screen display control and screen file function to store two menu settings and to recall the specific mode immediately. Also offers a convenient, selectable measurement area for white balance, AGC and electronic shutter settings.



- ◆ AGC functions can be selected via screen menu. Usually, the camera is used with AGC set to OFF, but when increased sensitivity is required, it is set to ON. When more sensitivity is needed, UP is selected.
- ◆ Allows you to select the white balance adjustment of Auto, SET and manual. In SET you adjust the white balance by pressing the UP button on the CCU while shooting a white object.
- ◆ There are two scene files A and B which can be selected according to the shooting state.
- ◆ Electronic shutter is available in Auto (auto electric shutter), 1/60-1/10000 and SS (Synchronized Scan).
- Auto controls the electronic shutter automatically to get the set video level. Can be selected in backlight correction, peak measurement, average measurement and measurement area.
- Exposure time can be fixed to 1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000 and 1/10000 of a second.
- Synchronized Scan sets the shutter in horizontal scanning time (1H).

CC431E Camera Control Unit for Elmo Remote-Head Cameras (Mfr # 97452 • B&H # ELCC431E)759.95

Camera Specifications	UN43H	MN43H	CN43H	ME421E	ME421R	MN400
Lens/lens mount	12mm	17mm	C-mount	17mm	17mm	17mm
Camera cable	Max. 98' (30m)	Max. 177' (54m)	Max. 177' (54m)	Max. 98' (30m)	Max. 98' (30m)	10' (3m), 33' (10m)
CCD	1/3"	1/2"	1/2"	1/2"	1/2"	1/2"
Color/Black & White	Color	Color	Color	B&W	B&W	Color
Built-in infrared-proof filter	–	–	–	✓	x	✓
Sync.system						
• Int/Ext auto changeover	✓	✓	✓	✓	✓	–
• C-SYNC/VS mode	–	–	–	✓	✓	–
• HD, VD mode	–	–	–	✓	✓	–
• Reset/Restart mode	–	–	–	✓	✓	–
• One-pulse trigger mode	–	–	–	✓	✓	–
Minimum illumination	3.5 lx	2.5 lx	1.5 lx	1.8 lx	1.8 lx	2 lx
Gain up	✓	✓	✓	✓	✓	✓
Auto/Manual White Balance	✓	✓	✓	–	–	✓
Auto electronic shutter	✓	✓	✓	✓	✓	✓
Manual electronic shutter	✓	✓	✓	✓	✓	✓
Shutter speed setting by 1H	–	✓	✓	✓	✓	✓
Field/Frame accumulation	–	–	–	✓	✓	–
Gamma correction	–	–	–	✓	✓	–
Impedance selector	–	–	–	✓	✓	–
Output field designation	–	–	–	✓	✓	–
Interlaced/Non-interlaced	–	–	–	✓	✓	–
VBS or VS video output	✓	✓	✓	✓	✓	–
Y/C video output	✓	✓	✓	–	–	–

LENSES & ACCESSORIES

Lenses for the UN43H 1/3" CCD Camera

TT203 Micro-Mount Lens (Mfr # 9289 • B&H # ELTT203): 3mm f/2.0 lens	359.95
TT1655 Micro-Mount Lens (Mfr # 9283 • B&H # ELTT1655): 5.5mm f/1.8 lens	179.95
TT2011 Micro-Mount Lens (Mfr # 9288 • B&H # ELTT2011): 11mm f/2 lens	239.95
TT3318 Micro-Mount Lens (Mfr # 9295 • B&H # ELTT3318): 18mm f/3.0 lens	309.95

Lenses for the MN400, MN43H and ME421E/ME421R 1/2" CCD Cameras

These lenses are designed for 1/2" CD micro cameras with a 17mm lens mount. They render a pin-cushion image that may be used for machine vision or robotic applications.

T183 Micro-Mount Lens (Mfr # 8771 • B&H # ELT183) A 3mm f/1.8 lens with a 10mm or about 0.4" close focus distance	499.95
T204D Micro-Mount Lens (Mfr # 9264 • B&H # ELT204D) A 4mm f/2.0 lens with a 10mm or about 0.4" close focus distance	379.95
T1675F Micro-Mount Lens (Mfr # 9250 • B&H # ELT1675F): A 7.5mm f/1.6 lens with a 20mm or about 0.8" close focus and 48.2° horizontal angle of view	159.95
T2015D Micro-Mount Lens (Mfr # 9265 • B&H # ELT2015D) A 15mm f/2 lens, which has a 90mm close focus distance	209.95
T3124 Micro-Mount Lens (Mfr # 9266 • B&H # ELT3124) A 24mm f/3.1 lens with a narrow angle of view at 15.3° horizontal and a M.O.D. of 250mm or about 10". It renders a very linear for capturing realistic images from a distance	349.95
T4536 Micro-Mount Lens (Mfr # 9819 • B&H # ELT4536) A 36mm f/4.5 lens meant for long distance image capture. Its MOD is 520mm (about 20')	514.95
T287P Micro-Mount Lens (Mfr # 9267 • B&H # ELT287P) A 7mm f/2.8 pinhole lens. Its front lens element is only 5mm in diameter	609.95

Macro Lenses for Robotics and Machine Vision

T3425M Macro Lens (Mfr # 8797 • B&H # ELT3425M): A 25mm f/3.4 macro lens which renders macro images ranging from 0.384x to 0.489x. It has a close focus distance of 3.5"	459.95
T3425MB Macro Lens (Mfr # 87971 • B&H # ELT3425MB): Same as above, renders a 0.67x sized image when compared to the actual size of the object	459.95
T3425MC Macro Lens (Mfr # 87972 • B&H # ELT3425MC): Same as above, renders a 1:1 life-sized image when compared to the actual size of the object	459.95
T416MB Macro Lens (Mfr # 92711 • B&H # ELT416MB): A 16mm lens that allows close focus at 0.9". It renders an image that is 1.6x the objects actual size	509.95



CCU Cables

For the UN-43H, MN43H and CN43H

6.5' Cable (Mfr # 9833 • B&H # ELEMCO2H)	209.95
10' Cable (Mfr # 98331 • B&H # ELEMCO3H)	259.95
16.5' Cable (Mfr # 98332 • B&H # ELEMCO5H)	359.95
40' Cable (Mfr # 98333 • B&H # ELEMCO12H)	469.95
65' Cable (Mfr # 98334 • B&H # ELEMCO20H)	759.95
98' Cable (Mfr # 98335 • B&H # ELEMCO30H)	1064.95
177' Cable (Mfr # 98336 • B&H # ELEMCO54H)	2129.95

For the MN400

10' Cable (Mfr # 9888 • B&H # ELMNC03A)	74.95
33' Cable (Mfr # 98881 • B&H # ELMNC10A)	169.95

For the ME421E and ME421R

65' Cable (Mfr # 92704 • B&H # ELEMCO20A) For the ME421E/421R	649.95
98' Cable (Mfr # 92705 • B&H # ELEMCO30A) For the ME421E/421R	949.95

Filter set for the MN400, MN43H, ME421E/421R: Includes MC Protector, PX-14, EP and ND8 filters. (Mfr # 87331 • B&H # ELFK) **229.95**

SUV-CAM

Portable Video Recorder

From personal to professional needs, recording solutions from Elmo's SUV-Cam will capture the moment. The SUV-Cam operates as a tiny, portable video recorder and remote head camera all-in-one. This technologically-advanced product is a high speed, micro camera device ideal as a police camera system, complete with helmet mounting capabilities. Offering one-push button recording and playback functions with frame by frame viewing capacities, the SUV-Cam is perfect for any type of industry use including professional athletes or your average person - even as advanced spy equipment.

The solid-state SUV-Cam (no moving parts) is a practical choice for law enforcement, military personnel, off-road drivers and for use in numerous sports applications. The 1/4" CCD camera records high resolution NTSC or PAL video (and audio) to the control unit, which stores video onto removable SD cards that can be used for quick playback on PC's with MPEG compatible media players. Its slim camera body is only 20mm in diameter and boasts a rugged waterproof and impact resistant stainless steel housing.

Because of the SUV-Cam's appropriateness for high speed, high impact and high stress situations, recording and playback functions have been made simple and accessible. Recording begins with one touch of a button, as does playback on the unit's 2.2" TFT high-resolution LCD display. Features like frame-by-frame viewing and recording interruption prevention give the SUV-Cam more value in the most rugged situations.



FEATURES

- ◆ The camera is small enough to be placed in areas inaccessible to a larger or heavier camera, with the actual number of possible placements limited only by your imagination. It can be attached to a motorcycle or snowmobile or placed on a dashboard in a law enforcement vehicle. It can also be worn on a helmet, making it a sure hit with skydivers, mountain bikers, snowboarders and other extreme sport athletes looking to capture video seen from their perspective.
- ◆ Put the recorder on standby with one push after start-up. Start recording with one more push. "Hold" feature provided to prevent interruption of recording by mis-handling during intense or extreme movements.
- ◆ Video is recorded in the MPEG4 format and stored to an SD memory card up to 2GB. Recorded video can be viewed right on the recorder's 2.2" high resolution LCD display or on any PC running Windows Media Player. With its ability to keep file sizes to a minimum while retaining high video resolution, MPEG4 is the preferred compression method for DVRs and related devices.
- ◆ The SD card protects your data from loss in high activity uses. Quick playback is enabled by a PC or card reader slot.
- ◆ Users can choose between three picture quality levels and three recording speeds in order to prioritize quantity over quality or vice versa, depending on the application.
- ◆ 2.2" high-resolution LCD display for one click file playback. Features include: frame-by-frame and bookmark function so it's easy to find your favorite scenes and moments.
- ◆ The camera body is as small as a lipstick case and waterproof to 132' (IPX8 rated). The tough stainless-steel cylindrical camera head resists deformation forces up to 2000 lbs. The camera comes standard with a 3.8mm lens.
- ◆ The recorder features a built-in microphone for recording audio along with the video. Alternatively, an external microphone can also be attached.
- ◆ An A/V output jack allows video to be presented on a large TV or projected on a wall.

SUV-Cam (Mfr# 97786 • B&H# ELSC5C)

With 3.8mm lens and attached 4.9' cable, 120-240v AC Adapter and Lithium-ion battery**899.95**

SUV-Cam (Mfr# 97786 • B&H# ELSC5C)

With 3.8mm lens and attached 2.6' cable, 120-240v AC Adapter and Lithium-ion battery**899.95**

2.8mm Wide Conversion Lens for SUV-CAM (Mfr# 2618-1 • B&H# ELSC128)89.95

Replacement Battery Pack for SUV-CAM (Mfr# 2615 • B&H# ELSCBP)7495

6mm telephoto lens for SUV-Cam (Mfr# 2616 • B&H# ELSC16)42.95

8mm telephoto lens for SUV-Cam (Mfr# 2616-1 • B&H# ELSC18)49.95

SUV-CAM Extended Battery Case (Mfr# 2619 • B&H# ELSCBEC)42.95

KP-M SERIES

1/3", 1/2" and 2/3" Interlace Scan Monochrome Analog Cameras

Compact and lightweight, these high-performance CCD cameras are designed to offer excellent sensitivity and superb resolution.

Ideal for machine vision, microscopy and other industrial applications, they feature multiple step electronic shutter,

field-on-demand, asynchronous reset, and internal or external sync. Aluminum die castings provide for a rugged camera that

is resistant to vibration. The use of high grade image sensors

provide excellent resolution and sensitivity. For improved vertical resolution, the cameras offer the choice of field or frame integration. Switches are provided for gamma correction and AGC. All connections can be made through the use of the

standard 12-pin Hirose connector. There is also a BNC video output. All versions are available in EIA (NTSC) or CCIR (PAL) formats, and with a remote camera head and CCU (KP-MB1AN).



FEATURES

- ◆ They use high grade CCDs with 410,000 pixels and 768 x 494 (HV) effective pixels to achieve 570 lines of horizontal resolution.
- ◆ On CCIR versions, the CCD has 470,000 pixels and 752 x 582 (HV) effective pixels to achieve 560 lines of resolution.
- ◆ Minimum sensitivity of 0.3 lux and S/N ratio of 56 dB.
- ◆ Standard C-type lens mounting allows the cameras to be installed on a microscope.
- ◆ Multiple step electronic shutter function allows shutter speeds to be selected in eight steps from 1/100 to 1/10000 seconds via switch on the rear.
- ◆ The field-on demand feature found on the KP-M1A, KP-M2A, KP-M3A, allows an image captured via optional timing by an external trigger signal to be output instantly. Capture time can be adjusted by an external trigger signal and the shutter.
- ◆ The cameras are made of die-cast aluminum to provide vibration-resistant performance.
- ◆ Video is output via the BNC video output or the DC IN/SYNC terminal (12-pin).
- ◆ Gamma can be switched between 1.0 and 0.45 with an internal switch.
- ◆ Gain can be switched between normal (NORM) and AGC.

Frame and Field Integration Modes

- ◆ Since the scanning line is read one by one in the frame integration mode, the highest vertical resolution can be obtained in the normal shutter mode. Since the scanning line is read two by two in the field integration mode, sensitivity is almost double in shutter operation in comparison with that in the frame storage mode.
- ◆ Integration mode can be switched between the frame mode and the field mode. An appropriate picture is obtained by a combination of the scanning system, the electronic shutter and the restart and reset function.

Int/Ext Sync

- ◆ Sync system and scanning system are automatically selected when an external sync signal is supplied. When an external sync signal isn't fed in, the camera is automatically operated in the internal sync (2:1 interlace) mode. The mode is automatically switched between the internal sync mode and the external sync mode. When the external sync signal of the composite video signal (VS) or the composite sync signal (SYNC) is fed in, the camera is operated in the external sync (2:1 interlace) mode.

KP-M3AN (Mfr # KP-M3AN • B&H # HIKPM3AN): 1/3" CCD Monochrome Analog Camera**CALL**

KP-M3AN PAK (Mfr # KP-M3ANPAK1 • B&H # HIKPM3ANPAK1):

KP-M3AN Camera and 45601-C4 Power Supply**CALL**

KP-M2AN (Mfr # KP-M2AN • B&H # HIKPM2AN): 1/2" CCD Monochrome Analog Camera**CALL**

KP-M2AN PAK (Mfr # KP-M2ANPAK1 • B&H # HIKPM2ANPAK1):

KP-M2AN Camera and 45601-C4 Power Supply**CALL**

KP-M2AP (Mfr # KP-M2AP • B&H # HIKPM2AP): 1/2" CCD CCIR (PAL) Monochrome Analog Camera.....**CALL**

KP-M1AN (Mfr # KP-M1AN • B&H # HIKPM1AN): 2/3" CCD Monochrome Analog Camera**CALL**

KP-M1AN PAK (Mfr # KP-M1ANPAK1 • B&H # HIKPM1ANPAK1):

KP-M1AN Camera and 45601-C4 Power Supply.....**CALL**

KP-M1AP (Mfr # KP-M1AP • B&H # HIKPM1AP): 2/3" CCD CCIR (PAL) Monochrome Analog Camera**CALL**

KP-M2RN • KP-M3RN

1/2" and 1/3" Near Infrared Monochrome Cameras

The KP-M2R (1/2" CCD) and KP-M3R (1/3" CCD) are interlace scan monochrome cameras with near infra-red sensitivity. Peak sensitivity occurs at 640 nanometers compared with a conventional camera whose peak sensitivity occurs at 510 nanometers. Useful sensitivity of the KP-M2R and KP-M3R extend above 900 nanometers, making them useful for applications ranging from microscopy to image processing systems. A high horizontal resolution of 570 TV lines and a S/N of 56db provide detailed images with low noise, in a compact rugged package. Standard features include a multiple step electronic shutter, internal or external synchronization, field or frame integration mode, and a field-on-demand function. Using the field on-demand feature the timing and length of an exposure can be accurately controlled. The field on-demand can function in the one trigger, two trigger, fixed shutter, and external shutter modes of operation, allowing easy integration into machine vision systems.



KP-M2RN (Mfr # KP-M2RN • B&H # HIKPM2RN): 1/2" CCD near IR cameraCALL

KP-M3RN (Mfr # KP-M3RN • B&H # HIKPM3RN): 1/3" CCD near IR cameraCALL

KP-M2RP (Mfr # KP-M2RP • B&H # HIKPM2RP):

1/2" CCD near IR CCIR (PAL) cameraCALL

KP-M3RP (Mfr # KP-M3RP • B&H # HIKPM3RP):

1/3" CCD near IR CCIR (PAL) cameraCALL



KP-MB1A

2/3" CCD Remote Head Camera with CCU

Same high picture quality, performance and functions as the KP-M1AN camera, except the KP-MB1A separates the lens and CCD assembly from the camera electronics to offer an extremely compact and lightweight camera head. The maximum length the lens/CCD assembly can be extended from the camera electronics is 3-ft. The size and weight of the camera head are ideal for mounting on optical instruments. (Mfr # KP-MB1A • B&H # HIKPMB1A)CALL

KP-M22AN/M32AN • KP-M20/M30

Compact and Ultra-Compact 1/2" and 1/3" Interlace Scan Monochrome Cameras

Offering the same features and specifications as the KP-MB2AN and KP-M3AN (respectively, but in smaller sizes, the compact KP-M22AN (1/2") and KP-M32AN (1/3") and the ultra-compact KP-M20 (1/2") and KP-M30 (1/3") are ideal for placement in tight spots.



KP-M22AN (Mfr # KP-M22AN • B&H # HIKPM22AN)

1/2" CCD Compact Monochrome CameraCALL

KP-M22AN PAK (Mfr # KP-M22AN PAK1 • B&H # HIKPM22ANPAK)

KP-M22AN Camera and 45601-C4 Power SupplyCALL

KP-M32AN (Mfr # KP-M32AN • B&H # HIKPM32AN)

1/3" CCD Compact Monochrome CameraCALL

KP-M32AN PAK (Mfr # KP-M32AN PAK1 • B&H # HIKPM32ANPAK)

1/3" CCD Compact Monochrome CameraCALL

KP-M20 (Mfr # KP-M20 • B&H # HIKPM20)

1/2" CCD Ultra-Compact Monochrome CameraCALL

KP-M20 PAK (Mfr # KP-M20PAK1 • B&H # HIKPM20PAK1)

KP-M20 Camera and 45601-C4 Power SupplyCALL

KP-M30 (Mfr # KP-M30 • B&H # HIKPM30)

1/3" CCD Ultra-Compact Monochrome CameraCALL

KP-M30 PAK (Mfr # KP-M30 • B&H # HIKPM30)

KP-M30 Camera and 45601-C4 Power SupplyCALL

45601-C4 12v DC Power Supply (Mfr # 45601-C4 • B&H # HI45601C4): 1.2 amps with 15' cable and 12-pin connector for KP-M Series cameras.

45601-C5 12v DC Power Supply (Mfr # 45601-C5 • B&H # HI45601C5)

With 12-pin connector plus 15' H&V drive cables, 15' trigger cable, and 15' video output cable, all with BNC connectors.

45601-C9 12v DC Power Supply (Mfr # 45601-C9 • B&H # HI45601C9)

1.2 amps with 15' cable and 12-pin connector, and 15' video cable with BNC connector.

KP-E500 • KP-DE500

Ultra High Sensitivity DSP B&W and Color Cameras

Designed for use in extremely low light levels, the KP-E500 (monochrome) and KP-DE500 (color) are designed using a EM-CCD that eliminates the problems inherent in other high sensitivity cameras using Image Transfer Tubes, such as after image lag, burn-in and short life span. The EM (electron multiplying) CCD allows the KP-DE500 to operate in a full motion mode at light levels down to 0.009 lux, and the KP-E500 in full motion mode at 0.00003 lux.

For even greater sensitivity, the cameras feature an accumulation mode of operation, where the CCD can accumulate charge for up to 64x normal, allowing operation in light levels as low as 0.00015 lux and 0.000005 lux (respectively). A built-in memory permits continuous full color image output, even in the accumulation mode of operation. To improve picture quality in low light levels, thermoelectric cooling is used on the EM-CCD to reduce the effects of dark noise along with a digital signal processor (DSP) that provides digital noise reduction of the luminous signal to yield sharp clear pictures with a high S/N ratio.



- ◆ They offer selectable backlight compensation with 9 modes, 3 modes of White Balance, manual or Auto Electronic Shutter modes, and adjustments for image quality. An output for an auto iris lens is provided. An on-screen menu system permits easy adjustment of all camera settings, and a RS-232 remote is provided for remote control.

KP-DE500

Color in full motion mode 0.0009 lx
Color accumulation mode 0.000015 lx

KP-E500

Monochrome in full motion mode 0.00003 lx
Monochrome accumulation mode 0.000005 lx

KP-E500: High Sensitivity Monochrome Camera (Mfr # KP-E500 • B&H # HIKPE500)

KP-DE500: High Sensitivity Color Camera (Mfr # KP-DE500 • B&H # HIKPDE500)



KP-D531 • KP-D591

High Sensitivity DSP Color Cameras

The KP-D531 features an auto-change integration mode for use in low light observation, at levels down to 0.02 lux. With auto-change integration, the IR cut filter is removed and the camera is switched to a monochrome mode to improve sensitivity. The KP-D591 goes down to 0.01 lux. Both cameras use a combination of CCD exposure time and field memory to increase their sensitivity by 64x compared with a conventional single CCD camera. Thermoelectric cooling is used on the CCD to reduce the effects of dark current noise at long exposure times. Digital signal processing is

employed, and enables functions such as noise reduction, backlight compensation, automatic sensitivity switching, positive or negative output, and a 2H enhancer for a sharp picture. Automatic color tracking can maintain proper color balance with changing light levels and color temperature. A 4x electronic zoom with pan and tilt feature is standard, and allows magnification of the picture even when a standard lens is used.

KP-D531: Low-Light DSP Color Camera (Mfr # KP-D531 • B&H # HIKPD531)

KP-D591: Low-Light DSP Color Camera (Mfr # KP-D591 • B&H # HIKPD591)

KP-D20A • KP-D20B

1/3" and 1/2" Interlaced Color CCD Cameras

The KP-D20A (1/3") and KP-D20B (1/2") are compact color cameras featuring 3rd generation DSP digital signal processing. The KP-D20A has a minimum sensitivity of 0.8 lux, while the KP-D20B has a minimum sensitivity of 0.3 lux. Both cameras feature 480 lines of resolution and are designed with a high quality optical path making them ideal for use in microscopy and high precision image processing systems. Designed for use with CS mount lenses, an optional CS-mount to C-mount lens adapter is also available.

An On Screen Menu system allows for easy selection and adjustment of all camera parameters. Digital adjustments are also provided for video level, black level, chroma level, and enhancement level. Features include three choices for white balance (ATW, Auto, Manual), 10-step electronic shutter (1/60 to 1/30,000 second) or AES, Backlight Correction, a 2H Enhancer for improving the sharpness of the picture, RS-232 port and a digital 4x zoom. A composite and S-Video output are available to match the requirements of the vision system.

KP-D20A: 1/3" Color CCD Camera (Mfr # KP-D20A • B&H # HIKPD20A)

KP-D20B: 1/2" Color CCD Camera (Mfr # KP-D20B • B&H # HIKPD20B)



HV-D30

High Resolution 3-CCD Interlace Scan C-Mount Color Camera

Powerful DSP enables the HV-D30 to achieve its small size, low power consumption and high stability. Built into a compact cube with a short depth dimension for incorporation into systems where space is critical, the HV-D30's multi-functional design is ideal for wide range of industrial, medical, and other imaging applications.



Three 410,000 pixel 1/3" CCDs deliver high sensitivity and high resolution. Incorporating a 12-bit A/D converter, 14-bit accelerated DSP and dynamic noise reduction, the camera achieves 800 lines of horizontal resolution and S/N ratio of 64dB. Clear high quality low noise images are possible even in a high gain mode. A built-in flange back adjustment allows the HV-D30 optical focus to be optimized with the selected optical system.



HV-D30: High Resolution 3-CCD Interlace Scan C-Mount Color Camera (Mfr # HV-D30 • B&H # HIKHVD30)



HV-HD30

3CMOS Hi-Def Interlaced Color Camera

Incorporating three HDTV 1/3" 1.3-megapixel CMOS sensors, the HV-HD30 achieves high picture quality with smearless imaging, providing 1080i and 720p camera outputs. A wide range of adjustments can be made remotely, providing versatility that makes the HV-HD30 usable as a studio sub-camera, a remote observation applications, point of view camera, and in industrial applications such as factory automation, high-end monitoring, and medical applications.

- ◆ By switching the operating mode, output is possible to output either 1080i or 720p system HD-SDI video signals. An RGB/component (Y/PB/PR) analog output (D-sub 15-pin) is also provided.
- ◆ Various adjustments can be made remotely, either from an optional compact remote control unit, or from a personal computer.

- ◆ Diverse digital signal processing technology such as gamma, knee, masking, and DTL, are accessible by up/down switches on the rear panel of the camera head, thereby providing high functionality and performance.

HV-HD30: 3-CMOS HD Camera (Mfr # HV-HD30 • B&H # HIKHVD30)

HV-D27A • HV-D37A

1/2" and 1/3" Interlace Remote Head 3-CCD Color Cameras

The HV-D27A (1/2") and HV-D37A (1/3") are separate head 3-CCD color cameras with a compact and lightweight CCU (camera control unit). Each CCD has 410,000 pixels, and for improved performance and reliability, the CCU circuitry from the processor to the encoder is contained in a single VLSI DSP chip. The C-mount lens fitting provides convenient physical compatibility with a broad selection of readily available and specialized optical systems.

Designed for microscopy, medical imaging, and other areas requiring a very small head, the cameras provide excellent performance with a full complement of features. 12-bit A/D converters provide 4096 levels of gray and improved color fidelity. A full menu system for selecting and setting camera operational parameters is available, once selections are made they can be stored to one of three scene files. Front panel

selection at the CCU allows easy recall of a particular scene file. Digital Signal Processing (DSP) is used to provide stability as well as additional features such as six vector color correction, ultra gain, selectable light metering and long term integration. Complete control of all camera parameters is available through the RS-232C port on the camera. Cable lengths between the camera head and CCU can be up to 65'.



HV-D27A: 1/2" Remote Head Camera (Mfr # HV-D27A • B&H # HIKHVD27A)

HV-D37A: 1/3" Remote Head Camera (Mfr # HV-D37A • B&H # HIKHVD27A)

KP-F30 • KP-FB30 • KP-F31 • KP-F39 • KP-F80

1/3" Progressive Scan Monochrome C-Mount Cameras

Designed for use in factory automation and industrial vision systems, the ultra compact KP-F30, remote head KP-FB30 (ideal where space is a premium), high speed KP-F31 and KP-F39, and high resolution KP-F39 feature square pixels and progressive scan to provide high vertical resolution of moving objects. Available with power over CameraLink (PCL) or with separate power (SCL), they each feature a CameraLink output using a small connector. The KP-F80 also offers selectable 8- or 10-bits per pixel.

The KP-F30 (0.7 lux) and KP-FB30 (7.4 lux) operate at 60 fps (frames per second) with 500 lines of horizontal resolution; the KP-F31 (7.4 lux) at 120 fps with 500 lines of resolution; the KP-F39 (7.4 lux) at 92 fps with 500 lines of resolution; and the KP-F80 (1 lux) operates at 30 fps with 800 lines of resolution.



KP-F30
rear



Standard features include external switch selection for all modes of operation, with an 8-step electronic shutter featuring a maximum speed of 1/100,000 second, internal or external sync modes, and fixed, manual or automatic gain control. A frame-on-demand function (3 modes) is available for capturing moving objects at a desired timing. In the one trigger mode of operation, the rising edge of the trigger pulse starts the exposure, the duration of the trigger pulse controls the integration time, and the falling edge of the trigger pulse resets vertical sync and delivers the triggered image. The cameras can also be operated in a fixed shutter mode or a reset control mode.

KP-F30SCL: 1/3" Compact 60 fps CameraLink VGA Monochrome Camera

KP-F30PCL: Same as above, except with mini PoCL CameraLink Cable

KP-FB30SCL: 1/3" Remote Head 60 fps CameraLink VGA B&W camera

KP-FB30PCL: Same as above, except with mini PoCL CameraLink cable

KP-F31SCL: 1/3" Compact 120 fps CameraLink VGA monochrome camera

KP-F31PCL: Same as above, except with mini PoCL CameraLink Cable

KP-F39SCL: 1/3" Compact 92 fps CameraLink VGA Monochrome Camera

KP-F39PCL: Same as above, except with mini PoCL CameraLink Cable

KP-F80SCL: 1/3" Compact 30 fps CameraLink VGA Monochrome Camera

KP-F80PCL: Same as above, except with mini PoCL CameraLink Cable

* PCL versions are powered by mini PoCL CameraLink cable and there is no 12-pin power connector on the camera

KP-F33 • KP-F37 • KP-F38

1/3" Ultra Compact Analog Progressive Scan Monochrome Cameras



Designed for use in factory automation and industrial vision systems, the KP-F33 (0.7 lux), KP-F37 (1 lux) and KP-F38 (1 lux) feature ultra compact size, square pixels, and progressive scan to provide high vertical resolution of moving objects. Featuring a single output connection, they operate at 30 fps (KP-F33), 70 fps (KP-F37) or 80 fps (KP-F38), with 500 lines of horizontal resolution. Standard features include external switch selection for all modes of operation, eight step electronic shutter featuring a maximum speed of 1/50,000 (KP-F33), 1/58,000 (KP-F37) and 1/66,000 (KP-F38), of a second, internal or external sync modes, and fixed, manual or automatic gain control. A frame-on demand (3 modes) function is available for capturing moving objects at a desired timing. In the one trigger mode of operation, the rising edge of the trigger pulse starts the exposure, the duration of the trigger pulse controls the integration

time, and the falling edge of the trigger pulse resets vertical sync and delivers the triggered image. The camera can also be operated in a fixed shutter mode or a reset control mode.

KP-F33 (Mfr # KP-F33 • B&H # HIKPF33)

1/3" Ultra Compact 30 fps Progressive Scan Monochrome C-Mount Camera

KP-F37 (Mfr # KP-F37 • B&H # HIKPF37)

1/3" Ultra Compact 70 fps Progressive Scan Monochrome C-Mount Camera

KP-F38 (Mfr # KP-F38 • B&H # HIKPF38)

1/3" Ultra Compact 80 fps Progressive Scan Monochrome C-Mount Camera

KP-F100BCL

2/3" Mega Pixel Progressive Scan Monochrome Camera with CameraLink Output

The KP-F100BCL is a high resolution progressive scan camera featuring a CameraLink output that includes 10-bit digital video, RS-232C remote control and trigger control lines. Designed for machine vision and image processing systems, the camera is capable of producing 15 fps at full vertical resolution, or 60 frames per second in the 4x accelerated mode of operation of progressively scanned video, from the 1.45 million pixel (1392 x 1040) CCD array. Square pixels make for an easy interface with vision and measurement systems. A frame on demand function allows images captured by use of an external trigger to be output immediately. Analog composite output is also provided. The CameraLink output allows direct interface with image processing systems, eliminating the A/D converter in the image processor. An 8-step electronic shutter (1/30-1/50,000) along with external H and V drive inputs, provide for ease of use in systems applications. The KP-F100BCL also features an RS-232 port for control of all camera functions.



KP-F100B-CL: 2/3" CCD Compact SXGA Camera Link Camera (Mfr # KP-F100B-CL • B&H # HIKPF100BCL)

KP-F100B-CL PAK 1: Includes KP-F100B-CL camera, EPIX PICXCI CL1 Camera Link Frame Grabber, CBL-CL-2M 2-meter Camera Link Cable, TA-M1 Tripod Adapter and 45601-C4 12v DC Power Supply (Mfr # KP-F100B-CL PAK1 • B&H # HIKPF100BCLPAK)

KP-F120CL 2/3" Mega Pixel Near IR Progressive Scan Monochrome Camera with CameraLink Output



Featuring a 2/3" 1.45-megapixel Progressive Scan CCD (1392 x 1040), the KP-F120CL combines high resolution and high sensitivity with good spectral response. Useable in the Near IR range, the spectral response extends above 1000 nm. Providing a standard aspect ratio of 4:3 the CCD features square pixels. The CameraLink digital output makes for ease of interface with standard frame grabbers. For use in high performance machine vision systems, the camera features a Frame-on-Demand mode that allows an image to be captured and output immediately following the use of a trigger pulse. For even higher frame rates the KP-F120CL features a partial scan mode where the scan can start at the top or the center of the frame and continue for the chosen number of lines (16H to 512H). For ease of use, the KP-F120CL features RS-232C remote control through the CameraLink interface, allowing remote control of all camera operating functions.

KP-F120-CL: 2/3" CCD Megapixel Near IR Progressive Scan Camera (Mfr # KP-F120-CL • B&H # HIKPF120CL)

KP-F120B-CL PAK 1: Includes KP-F120-CL camera, EPIX PICXCI CL1 Camera Link Frame Grabber, CBL-CL-2M 2-meter Camera Link Cable, TA-F120 Tripod Adapter and 45601-C4 12v DC Power Supply (Mfr # KP-F120-CL PAK1 • B&H # HIKPF120CLPAK)

KP-F200SCL • KP-F230SCL 1/1.8" CCD Ultra Compact UXGA Monochrome Cameras with CameraLink Output

Featuring a 1/1.8" 2-megapixel (1628 x 1236) progressive scan CCD, the KP-F200SCL (2 lux) and KP-F230SCL (7.4 lux) combine high resolution and a host of versatile functions in an ultra compact package. Available with power over CameraLink (PCL) or with separate power (SCL), they feature a CameraLink output using a small connector. The CameraLink digital output is selectable as 10 or 8 bits per pixel, making easy to interface with standard frame grabbers. For use in high performance machine vision systems, they offer a Frame on-Demand (3 modes) function that allows an image to be captured and output immediately following the use of a trigger pulse. For even higher frame rates they feature a partial scan mode where the scan can start at the top or the center of the frame and continue for a selected number of lines (16H to 512H). For ease of use, they offer RS-232C remote control, via the CameraLink interface, allowing remote control of all camera operating functions. Otherwise the same, the KP-F200SCL features UXGA resolution at 15 fps, the KP-F230SCL features UXGA resolution at 30 fps.



KP-F200SCL: Ultra Compact UXGA Monochrome Camera

KP-F200PCL: Same as above, except power is provided by mini PoCL CameraLink cable and there is no 12-pin power connector on the camera

KP-F230SCL: Ultra Compact UXGA Monochrome Camera

KP-F230PCL: Same as above, except power is provided by mini PoCL CameraLink cable and there is no 12-pin power connector on the camera

KP-F500SCL • KP-F500PCL

5-Megapixel Progressive Scan QXGA Color Cameras

Featuring a 5-megapixel 4:3 CCD with square pixels, the KP-F500SCL/PCL combines very high resolution and a host of versatile functions in a compact light weight package. Available with power over CameraLink (PCL) or with separate power (SCL), these cameras feature a CameraLink output using a small connector. The camera can be operated in the Base or Medium CameraLink configuration. The CameraLink digital output is selectable as 12, 10 or 8 bits per pixel making it easy to interface with standard frame grabbers. For use in high performance machine vision systems, they offer a Frame-on-Demand function that allows an image to be captured and output immediately following the use of a trigger pulse. For even higher frame rates they feature a partial scan mode where the scan can start at the top or the center of the frame and continue for a selected number of lines available in 1H steps. For ease of use, RS-232C port allows remote control of all camera operating functions.



KP-F500SCL: Megapixel Progressive Scan Color Camera (Mfr # KP-F500SCL • B&H # HIKPF500SCL)

KP-F500PCL: Same as above, except power is provided by mini PoCL CameraLink cable and there is no 12-pin power connector on the camera



KP-FD30 • KP-FD30M • KP-FD30CL

VGA Progressive Scan CCD Color Cameras

Designed around a progressive scan CCD with a primary RGB color filter, the KP-FD30 series cameras achieve high vertical resolution and high color fidelity for use in image processing systems, copy stands, microscopy and medical applications. High S/N ratio is obtained via a digital signal processor (DSP) which has improved luminance signal processing, such as 5H enhancer processing. The KP-FD30 can output progressive scan VGA images at 60 fps from the standard 15-pin HD connector allowing the camera to be connected directly to a computer monitor. They can also output composite, S-Video or RGB at standard 30 fps. Incorporating advanced features

such as ATW to maintain proper color temperature with changing light levels, ALC to maintain proper output levels by controlling the lens iris, AES and AGC, and a Frame / Field-on- Demand mode featuring a one trigger and fixed shutter mode of operation, the cameras can be configured to the requirements of the imaging task. Otherwise the same, the KP-FD30CL has a CameraLink output (no 30 fps interlaced output). The KP-FD30M is the same as the KP-FD30 except it has a built-in frame memory that allows the camera to be used in a machine vision application without the use of a frame grabber. A trigger signal stores the last frame of video in the camera memory where it is continually read out until the next trigger.

KP-FD30 (Mfr # KP-FD30 • B&H # HIKPFD30)

VGA Progressive Scan CCD Color CameraCALL

KP-FD30 PAK 1 (Mfr # KP-FD30 PAK1 • B&H # HIKPFD30PAK): Includes KP-FD30

camera, 45601-C4 power supply and TA-F120 tripod adapterCALL

KP-FD30M (Mfr # KP-FD30M • B&H # HIKPFD30M)

VGA Progressive Scan CCD Color CameraCALL

KP-FD30CL (Mfr # KP-FD30CL • B&H # HIKPFD30CL)

VGA Progressive Scan CCD Color CameraCALL

KP-FD32F • KP-FD140F

High Speed Progressive Scan Color CCD Cameras with Firewire 800 Interface

Designed for use in machine vision, microscopy and medical applications, these cameras feature the latest IEEE-1394.b interface for high speed data transfer between the camera and the PC. Featuring a 1/2" progressive scan CCD with 656 x 492 (KP-FD32F) or 1392 x 1040 (KP-FD140F) effective pixels and a Bayer RGB filter, they produce excellent image quality at 60 fps (KP-FD32F) and 15 fps (KP-FD140F). Standard features include selectable image size, ATW or Memory mode for white balance, adjustable gamma, AES or manual shutter modes, a six vector color corrector, adjustable color saturation, sharpness and brightness. A frame-on-demand mode utilizing the IEEE-1394.b connection is provided, allowing the camera to capture images at a precise timing. Includes a driver along with software to view and control the camera. Multiple cameras can be used simultaneously through the use of a daisy chain connection. They output Progressive: RGB 24, YUV (4:2:2), YUV (4:1:1), Raw 8 and Raw 16.



KP-FD32F: 656 x 492 pixels
(Mfr # KP-FD32F • B&H # HIKPFD32F)

KP-FD140F: 1392 x 1040 pixels
(Mfr # KP-FD140F • B&H # HIKPFD140F)

KP-FD140 • KP-FD202 • KP-FD500

Megapixel Progressive Scan Color Cameras

Designed for use in machine vision applications requiring high performance in a compact package, the KP-FD140, KP-FD202 and KP-FD500 feature a CameraLink output using the SCL or PCL type connection. The CameraLink output can be configured to run as a Base or Medium configuration and can be selected to work at 36, 30 or 2- bit depth.

The KP-FD140 features a 1/2" progressive scan CCD with 1.45 million pixels (1392H x 1040V), the KP-FD202 a 1/1.8" 2-megapixel CCD (1628 x 1236), and the KP-FD500 a massive 2/3" 5-megapixel CCD (2456 x 2058)—each combining with a Bayer RGB filter, allowing them to produce excellent image quality at high resolution, while outputting 30 fps. The KP-FD500 outputs 12 fps. Standard features include ATW or Memory mode for white balance, adjustable gamma, AES or manual shutter modes, a six vector color corrector, adjustable color saturation, sharpness and brightness. A frame on-demand mode is provided, allowing the camera to capture images at a precise timing. A partial scan mode can be selected to allow for higher frame rates and can be set to start at the top or center of the frame and continue for the selected number of lines.



KP-FD140SCL (Mfr # KP-FD140SCL • B&H # HIKPFD140SCL)
1.45 Megapixel Progressive Scan Color Camera.....**CALL**

KP-FD140PCL (Mfr # KP-FD140PCL • B&H # HIKPFD140PCL)
Same as above, except with mini PoCL CameraLink Cable**CALL**

KP-FD202SCL (Mfr # KP-FD202SCL • B&H # HIKPFD202SCL)
2-Megapixel Progressive Scan Color Camera.....**CALL**

KP-FD202PCL (Mfr # KP-FD202PCL • B&H # HIKPFD202PCL)
Same as above, except with mini PoCL CameraLink Cable**CALL**

KP-FD500SCL (Mfr # KP-FD500SCL • B&H # HIKPFD500SCL)
5-Megapixel Progressive Scan Color Camera.....**CALL**

KP-FD500PCL (Mfr # KP-FD500PCL • B&H # HIKPFD500PCL)
Same as above, except with mini PoCL CameraLink Cable**CALL**

* PCL versions are powered by mini PoCL CameraLink cable and there is no 12-pin Hirose connector on the camera

HV-F31F • HV-F31CL • HV-F22F • HV-F22CL

3-CCD Progressive Scan XGA and SXGA Color Cameras

Incorporating three 1/3" 800,000 (1024 x 768) pixel progressive scan CCDs (HV-F31F and HV-F31CL) or three 1/2" 1.45 million (1360 x 1024) pixel progressive scan CCDs (HV-F22F and HV-F22CL), these cameras produce excellent image quality with high vertical resolution for use in medical, microscopy, and other image processing applications. Featuring a 3rd generation DSP, the HV-F22F/CL and HV-F31F/CL incorporate ATW, ASC, AES, ALC, auto knee, flare correction, 6 vector color correction, and 4 scene files for the setup and storage of all camera operational parameters. The cameras also feature a long integration mode for use in low light levels, and a frame-on demand mode for use in vision systems. In the frame-on-demand mode, a strobe signal is output at the end of the trigger pulse. An industry standard 12-pin Hirose connector is used for external sync, trigger input, and strobe output signals.

◆ On the HV-F31F and HV-F22F, their IEEE1394 interface allows easy connection with a computer permitting resolution in the XGA/SVGA or SXGA/VGA ranges (respectively). Their frame rate, bits per pixel and resolution are related and can be selected to best meet the imaging requirements. Power can be input through the 12-pin Hirose or IEEE1394 connector.



HV-F31F (Mfr # HV-F31F • B&H # HIF31F)
1/3" Progressive Scan Camera with IEEE1394 Interface**CALL**

HV-F22F (Mfr # HV-F22F • B&H # HIF22F)
1/2" Progressive Scan Camera with IEEE1394 Interface**CALL**

◆ On the HV-F31CL the CameraLink interface allows easy connection with a frame grabber and allows the camera to operate at a full 30 fps with full XGA resolution. On the HV-F22CL, the CameraLink interface allows the camera to operate at 15 fps with full SXGA resolution. Both output RGB data at 24 bits per pixel enabling 256 shades of gray for each channel. They are powered through the 12-pin Hirose connector. Camera control is handled via the CameraLink interface.

HV-F31CL (Mfr # HV-F31CL • B&H # HIF31CL)
1/3" Progressive Scan Camera with CameraLink Interface**CALL**

HV-F22CL (Mfr # HV-F22CL • B&H # HIF22CL)
1/2" Progressive Scan Camera with CameraLink Interface**CALL**

IK-52V • IK-53V

1/2" and 1/3" Ultra-Small "Ice Cube" CCD Monochrome Cameras with Progressive Scan

The C-mount IK-52V (1/2") and IK-53V (1/3") combine non-interlaced Progressive Scan imaging with ultra-compact dimensions for superior performance in a wide range of quality-sensitive applications—delivering better results than cameras twice their size. Although small, they are solidly built to endure mechanical vibrations often experienced in machine-vision applications. With their fast shutter and progressive scan features they can also be used medical and scientific environments.



- ◆ For the best single-frame image quality, they capture images with a progressive scanning (1/60 second non-interlaced).
- ◆ High speed shutter from 1/60 to 1/100,000 second
- ◆ VGA output to frame grabber or direct to a VGA monitor
- ◆ HD/VD selectable sync allows them to operate in multi-camera, multi control-panel environments.
- ◆ 1 lux at f/1.4 and 60dB S/N ratio

IK-52V: 1/2" CCD Color Industrial Video Camera (Mfr # IK-52V • B&H # TOIK52V)**399.95**

IK-53V: 1/3" CCD Color Industrial Video Camera (Mfr # IK-53V • B&H # TOIK53V)**434.95**

**Note: The IK-52V or IK-53V require the EXC-505V, 510V or 525V cable*



IK-M44

Remote Head CCD Camera

This versatile, powerful camera system is compatible with 1/2" and 1/3" heads and C-mount lenses. It delivers excellent image resolution, while compact dimensions allow greater flexibility in mounting choices. Remote-head camera designs are focused on versatility, high-resolution imaging and rugged mechanical and easy-to-install features. Ideal for medical, broadcast, education, machine vision,

microscopy, endoscopy, non-destructive testing and scientific imaging. Without requiring readjustment or electrical adaptation, the IK-CU44A camera control unit (CCU) switches from any of the three camera heads, allowing you to perform a variety of professional imaging tasks.

- ◆ 470 line resolution from all heads
- ◆ RS-232C allows PC Control of CCU
- ◆ 768TV Line Horizontal Resolution
- ◆ 1/60 to 1/10,000 second electronic shutter
- ◆ Excellent low-light performance
- ◆ Choice of three camera heads
- ◆ Compact, lightweight, easy to install
- ◆ Five 12mm micro-mount lenses ranging from 3mm wide angle to 24 mm telephoto are available.

IK-UM44H Remote Head CCD Camera (Mfr # IK-UM44H • B&H # TOIKUM44H)

A small 3.5 lux 1/3" CCD lipstick camera tethered to the IK-CU44A CCU via optional cables up to 100' away**649.95**

IK-C44H Remote Head CCD Camera (Mfr # IK-C44H • B&H # TOIKC44H)

A small 1.5 lux 1/2" CCD C-mount industrial camera tethered to the IK-CU44A CCU via optional cables up to 100' away.....**424.95**

IK-M44H Remote Head CCD Camera (Mfr # IK-M44H • B&H # TOIKM44H): A 1/2" CCD lipstick camera tethered to the IK-CU44A CCU via optional cables up to 100' away**499.95**

IK-CU44A Remote Head CCD Camera (Mfr # IK-CU44A • B&H # TOIKCU44A): The dedicated camera control unit for the above remote head cameras. The CCU has composite and S-Video connectors that will output 470 lines of horizontal resolution when connected to the cameras.....**649.95**

IK-TF5

1/3" 3-CCD Progressive Scan C-Mount Camera

The IK-TF5 is designed to capture high resolution color images of high speed machine vision and other industrial and even scientific processes. The co-site sampling arrangement of the CCDs means there is no RGB shift, so the capture of picture information is more accurate with less jitter, higher resolution (500 TV Lines), and excellent color reproduction. Image-jitter is eliminated through the use of Progressive Scan CCDs and a high-speed shutter. The IK-TF5 also has a Partial Scan mode that can output 180 frames per second. Full pixel, independent readout is 30 fps.

Advanced functions include a nine-step 1/100 to 1/100,000 second electronic shutter system essential for high-speed applications; automatic and manual white balance, 1-pulse or 2-pulse random triggers, and a clean 64dB signal-to-noise ratio. Also features an RS-232 interface enabling remote control operation via a PC.



IK-TF5: 1/3" 3-CCD Progressive Scan C-Mount Camera (Mfr # IK-TF5 • B&H # TOIKTF5) **1749.95**

IK-TF5C: Same as above with Camera Link output—requires mini camera link cable (Mfr # IK-TF5C • B&H # TOIKTF5C) **1839.95**

IK-TF7

1/3" 3-CCD Progressive Scan C-Mount Camera with Removable IR Filter

Ultra-compact and lightweight, the IK-TF7 features a small form factor perfect for designing into space-sensitive machine vision applications. A 3-CCD 1024 x 768 progressive scan color camera, the IK-TF7 is ideally suited for online color inspection, product testing, identification and measurement applications and more. The IK-TF7 has a smaller pixel size (4.65 x 4.65 μ m) than the K-TF5 and features a removable IR filter feature. It also features a co-site sampling arrangement of the CCDs to eliminate RGB shift, making image capture more accurate with higher resolution (1024 x 768). Color reproduction is enhanced due to its color-shading correction feature. For accurate capture of fast-moving color items under test, the camera features a variable-speed, 9-step shutter ranging from 1/100 to 1/100,000 of a second, along with an advanced trigger function. In the partial scan mode, the IK-TF7 offers high-speed readout of up to 90 frames per second. Full pixel, independent readout is 30 fps. RS-232 port enables remote control operation via a PC. Also features automatic and manual white balance, 1-pulse or 2-pulse random triggers, asynchronous reset, and a clean signal-to-noise ratio of 60dB.



IK-TF7: 1/3" 3-CCD Progressive Scan C-Mount Camera (Mfr # IK-TF7 • B&H # TOIKTF7) **2564.95**

IK-TF7C: Same as above with Camera Link output—requires mini camera link cable (Mfr # IK-TF7C • B&H # TOIKTF7C) **2734.95**



IK-TF9C

1/3" 3-CCD Progressive Scan Megapixel C-Mount Camera

The C-mount IK-TF9C is a megapixel high-speed camera using three-CCD color technology. Featuring 2048 x 1536-pixel output resolution with a frame rate of 20 f/s (full frame) and 40 f/s (partial scan), the camera is well-suited for inspecting larger surfaces with more precision and high color fidelity. It incorporates Toshiba's proprietary progressive scan technology, eliminating image

jitter, which makes it ideal for high-speed industrial machine-vision applications. These include semiconductor inspection, food sorting and packaging, precision color web inspection, color printing and other high-speed, color imaging tasks, as well as scientific imaging, medical diagnostics and high-speed military imaging. Features include on-screen and RS-232 setup, asynchronous reset, automatic and manual white balance and minimum illumination of 10 lux. Other features include 8-bit RGB digital output and Camera Link compatibility for ease of operation.

IK-TF9C: 1/3" 3-CCD Progressive Scan C-Mount Camera with Camera Link output - requires mini camera link cable (Mfr # IK-TF5 • B&H # TOIKTF5) **4579.95**

IK-TU51

3-CCD Remote Head Camera System with Interchangeable Heads

An innovative camera system available with either 1/3" (IK-TU53H) and/or 1/2" (IK-TU52H) IT Exview HAD CCD image sensors, the C-mount IK-TU51 combines this with 800-line resolution, making it ideal for a variety of industrial, entertainment and R&D applications. The IK-TU51 provides real-time imaging with 10-bit digital signal processing. The imager offers a frame memory for continuous video imaging in integration mode, a freeze frame function, and a user-selectable one or two pulse triggering mechanism.

Other features include LVDS digital and RGB analog outputs, .02 lux (at 4 second exposure), RS-232C interface, 14-step detail enhancement capability and a six vector color enhancement circuit. Easy to integrate, the IK-TU51 is ideal for laboratory imaging, machine vision, microscopy, specialty broadcast and other tasks that require the flexibility of a 2-head, high resolution camera system. The imager is available with an and a standard C-mount lens flange.



IK-TU51CU: Camera Control Unit for 1/2" and 1/3" CCD Camera Heads (Mfr # IK-TU51CU • B&H # TOIKTU51CU).....**2174.95**

JK-TU52H: 1/2" CCD Progressive Scan C-mount camera head for use with the IK-TU51CU (Mfr # JK-TU52H-CH40 • B&H # TOJKTU52HCH4)**2699.95**

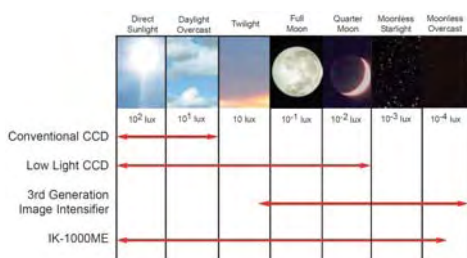
JK-TU53H: 1/3" CCD Progressive Scan C-mount camera head for use with the IK-TU51CU (Mfr # JK-TU53H-CH40 • B&H # TOJKTU53HCH4)**2139.95**

IK-1000ME

Extreme Low Light Color Video Camera

Featuring Toshiba's breakthrough imaging system based on their proprietary electron-multiplying CCD technology, the IK-1000ME allows users to capture sharp full-color images in machine vision applications in light as low as the equivalent of moonless overcast (10-4 lux). Using an Electron Multiplying CCD (EMCCD) architecture, the electron multiplying CCD enhances the incoming signal by a factor of one thousand—making it 1,000 times more sensitive than a conventional color CCD. As a result, the camera delivers maximum full color video reproduction in absolutely minimum illumination. The technology also eliminates the readout noise common with traditional CCD's. The result is a virtually noiseless 30 frames per second in near total darkness.

Although a camera with an image intensifier can capture images in 10-4 lux conditions, the images are not color, the camera is bulky, and requires maintenance. Likewise, a thermal imaging camera does not capture color images and is also bulky. Thus, the IK-1000ME



outperforms all other low-light color video technologies in a compact, maintenance-free design.

The IK-1000ME's compact design and maintenance free construction make it ideal for machine vision and industrial inspection applications. In addition to the 1/2" EMCCD 658 x 496 sensor, the camera has a built-in electronic shutter adjustable to 1/2000 sec., and accepts C-Mount lenses.

IK-1000ME: 1/2" Extreme Low Light Color Video (Mfr # IK-1000ME • B&H # TOIK1000ME)**5499.95**

IK-HD1

World's Smallest High-Definition Camera Head and Ultra-Compact CCU

The 1/3" IK-HD1 3-CCD interlaced HD camera head unit is just 1.6" in size and weighs just 2.3 oz, yet delivers crisp color images with sharp detail and bright contrast, utilizing Toshiba's sophisticated 3CCD prism block imaging technology. Extremely versatile, the camera head can be connected to the control unit by up to 100' cable, allowing it to be directly mounted on a performer, a helmet or hat, or in a confined space or tight corner. It can also be integrated into a larger system for imaging applications that require the flexibility of a very small HD camera package.



◆ With 1920 x 1080 resolution, power requirements of 12v DC and power consumption of only 10.3 watts, the IK-HD1 is an ideal solution for a variety of imaging needs including reality TV, speciality broadcast, scientific imaging and diagnostics, homeland security, and industrial video inspection applications. Other features include a C-mount lens flange, RS-232 interface, and multiple outputs including 1080i, HD-SDI and analog RGB or component, making it very easy for integration. Accessories include a 4mm or 15mm lens and camera cables.

◆ The IK-HD1C is an interface box for connecting the IK-HD1H camera head to an HD video monitor. It provides analog HD (BNC x3) and digital HD (HD-SDI) outputs to connect to an HD monitor. Most camera controls are accessed from the front of the unit. These include a power On/Off, an AWB and gain switch, menu selection and a button to change scene files and display modes. The rear of the unit adds a 59.94i to 60i format switch as well as a key lock On/ Off switch, two sync ports, a wired remote control terminal and a 12v DC power input.

IK-HD1H: 3-CCD Remote Color Camera Head (Mfr # IK-HD1H • B&H # TOIKHD1H)	5546.95
IK-HD1C: Camera Control Unit for IK-HD1H Camera Head (Mfr # IK-HD1C • B&H # TOIKHD1C)	3932.50
10' (3m) Camera Head Cable (Mfr # EXC-HD03 • B&H # TOEXCHD03)	599.95
20' (6m) Camera Head Cable (Mfr # EXC-HD06 • B&H # TOEXCHD06)	959.95
33' (10m) Camera Head Cable (Mfr # EXC-HD10 • B&H # TOEXCHD10)	1279.95
98' (30m) Camera Head Cable (Mfr # EXC-HD30 • B&H # TOEXCHD30)	2999.95

Accessories for all Toshiba CCD Cameras

Camera Head Cables for IK-M44H, IK-UM44H

6' Cable (TOEXC4302A)	173.95	10' Cable (TOEXC4303)	234.95
16.5' Cable (TOEXC4305)	339.95	39' Cable (TOEXC4312)	499.95
65' Cable (TOEXC4320)	609.95	98' Cable (TOEXC4330)	849.95

Camera Head Cables for JK-TU52H and JK-TU53H

10' Cable (TOEXCT503)	274.50	20' Cable (TOEXCT506)	449.95
33' Cable (TOEXCT510)	629.95	98' Cable (TOEXCT530)	1714.95

12-pin Output Cable for IK-52V/IK-53V "Ice Cube" Cameras

16.5' Cable (Mfr # EXC-505V • B&H # TOEXC505V)	224.95
33' Cable (Mfr # EXC-510V • B&H # TOEXC510V)	329.95
82' Cable (Mfr # EXC-525V • B&H # TOEXC525V)	639.95

Camera Link Cables for the IK-TF5C, IK-TF7C and IK-TF9C

7' Mini CL connector cable (Mfr # CLM-02M • B&H # TOCLM02M)	106.95
16.5' Mini CL connector cable (Mfr # CLM-05M • B&H # TOCLM05M)	139.95
16.5' Mini CL connector cable (Mfr # EXC-CL5S • B&H # TOEXCL5S)	149.95

C-Mount Lenses for IK-HD1H and JK-TU53H

4mm f/3.0 C-Mount Lens (Mfr # TF4DA-8 • B&H # TOTF4DA8)	329.95
15mm f/2.2 C-Mount Lens (Mfr # TF15DA-8 • B&H # TOTF15DA8)	407.50

Micro Mount Lenses for 1/3" IK-UM44H Lipstick Camera

5.5mm f/1.6 Micro Mount Lens (Mfr # JK-L55U • B&H # TOJKL55U)	229.95
18mm f/3.3 Micro Mount Lens (Mfr # JK-L18U • B&H # TOJKL18U)	322.50

Micro Mount Lenses for 1/2" IK-M44H Lipstick Camera

4mm f/2.0 Micro Mount Lens (Mfr # JK-L04M2 • B&H # TOJKL04M2)	354.50
7.5mm f/1.6 Micro Mount Lens (Mfr # JK-L75M • B&H # TOJKL75M)	187.50
15mm f/2.0 Micro Mount Lens (Mfr # JK-L15M2 • B&H # TOJKL15M2)	234.95
24mm f/3.1 Micro Mount Lens (Mfr # JK-L24M2 • B&H # TOJKL24M2)	299.95

Misc. Accessories

UL-Listed AC to 12v DC Power Supply (TOACY415A)	124.95
C-mount Adapter for IK-M44H (TOCMAM40)	53.50
Tripod Mount for JK-TU52H and JK-TU53H (TOJKKTU5)	64.95
Tripod Mount for IK-TF5/IK-TF7 (TOJKKS42)	CALL

KY-F550U

1/3" 3-CCD Camera

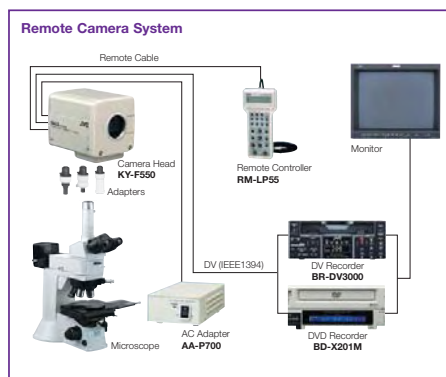
The KY-F550U is an ultra-compact high-performance 3-CCD camera that utilizes 12-bit A/D conversion and 24-bit digital signal processing for high picture stability, fine detail, and exceptional picture quality. Fully featured, yet weighing only 1.1 lbs., it offers a wide range of standard input and output connections which simplifies integration into a broad array of imaging applications. Ideal for computer imaging, microscopy, videoconferencing, distance learning, remote control, and surveillance applications where the finest detail and picture quality is required.

The KY-F550U accepts a C-Mount lens, or with an adapter, can be connected to microscope, slit lamp, operation microscope, shadowless lamp, etc. It offers a built-in IEEE1394 interface that allows digital video signal transfer to devices, such as a computer or DV recorder without any loss of image quality. In addition, the bundled PC software (DV-Link) allows live video viewing on a PC monitor, while simultaneously offering full access to the camera control functions.



FEATURES

- ◆ Ultra-compact size, all-in-one camera unit (no separate camera control unit required).
- ◆ 800 lines of horizontal resolution, 62dB S/N ratio and f11 sensitivity at 2000 lux.
- ◆ 12-bit A/D converters digitally convert the entire dynamic range of each CCD (400%) without distortion, with the finest possible steps. Together with a 24-bit, super fast, multi-stream, parallel processing DSP, highlight handling is dramatically improved and gamma correction is close to perfect, approaching the color reproduction and shadow detail of a full studio camera.
- ◆ Digital Auto Shading Compensation function compensates for color shading errors caused by interaction between the lens and prism assembly in C-mount optical systems.
- ◆ The installed IR-Cut filter enhances sensitivity to visible spectrum for color images. Easy access means that the filter can be easily removed and replaced by JVC's quartz filter option. This permits black & white imaging within the IR band of the spectrum. In this configuration the camera can produce images in ultra low light conditions.
- ◆ Compatible with JVC KY-F55B series cameras and accessories.
- ◆ Supplied with Software Development Kit (SDK) and system software for capturing still and moving images from the DV output.
- ◆ Analog RGB, composite and S-Video output.
- ◆ DV (IEEE1394) interface for high-quality picture capture to a computer, another DV recorder or the BD-X201M Medical DVD recorder. In addition, the bundled software allows the DV signal to be viewed via the PC, while also offering full access to the main camera control parameters.
- ◆ Full remote control with optional RM-LP55 or computer control via RS-232C.



KY-F550U 3-CCD Camera (Mfr # KYF550U; B&H # JVKYF550U)**3459.95**

AC Adapter for the KY-F550U (Mfr # AAP700U; B&H # JVAAP700U): Converts standard 120v AC current to 12v DC for the KY-F550U. The converter box includes an 8-pin to 8-pin cable to provide the power to the camera**49.95**

Full-Function Handheld Remote (Mfr # RM-LP55U; B&H # JVRMLP55U)**699.95**

Signal System	NTSC
Image Device	1/3" 3-CCD
Lens	C-mount
Number of Pixels	1,230,000 total pixels 411,000 pixels/CCD x 3
Horizontal Resolution	800 TV lines
Minimum Illumination	1 lux
Signal-to-Noise Ratio	62 dB
Sensitivity	f/11 at 2000 Lux
Signal Connectors	FireWire - 6-pin (x1) RGB / Y/C - 9-pin (x1) Composite video - BNC (x1) Trigger - 6-pin mini DIN (x1) Remote - 6-pin mini DIN (x1) Lens - 8-pin mini DIN (x1) Power - 8-pin mini DIN (x1)
Power Requirements	12v DC with AA-P700 AC Adapter
Dimensions (WHD)	2 ¹³ / ₁₆ x 2 ⁹ / ₁₆ x 3 ³ / ₁₆ "
Weight	1.1 lbs



KY-F560U

1/2" 3-CCD Camera with Optional SDI Interface

A multi-purpose camera with analog composite video and optional SDI video output board, the KY-F560 can be controlled remotely on a pan & tilt head or integrated with special studio kits for use as a studio camera. With 12-bit A/D converters and 24-bit DSP, this small system camera can provide quality images with excellent color reproduction and color separation. Both processes were developed to defeat hard to interpolate images that include low- and bright-light scenes, complex patterns and textures and subtle color and detail reproduction. A range of accessories allows it to be integrated into a variety of system configurations for use in industrial, broadcast and medical applications. Remote system component include controllers and remote-control heads. The studio system components include studio viewfinder, studio CCU, intercom compatibility, and an uncompressed digital output option.



FEATURES

- ◆ Three 410,000 pixel CCDs offer the greatest color and contrast representation possible. The advanced circuitry defeats a high level of vertical smear, video lag and image burn artifacting which leads to life-like imagery under a wide range of shooting conditions.
- ◆ 12-bit A/D converters digitally convert the entire dynamic range of each CCD (400%) without distortion, with the finest possible steps. Together with a 24-bit, super fast, multi-stream, parallel processing DSP, highlight handling is dramatically improved and gamma correction is close to perfect, approaching the color reproduction and shadow detail of a full studio camera.
- ◆ Outputs high quality standard definition video. S/N ratio is 62 dB. Sensitivity is F13 at 2000 lux, one to two stops faster than most cameras in this category. Outputs 850 horizontal lines of resolution, greater than all but the best professional monitors and recorders can accept.
- ◆ Automatic settings keep colors consistent even when lighting conditions change. Auto white balance continually adjust for lighting conditions that change- throughout a day as an example. If lighting becomes too low for standard sensitivity the camera can switch on gain to raise the overall video levels. A variable electronic shutter will limit excessively bright lighting beyond the minimum aperture of the lens.



- ◆ Squeezed 16 x 9 mode available
- ◆ Built-in LoLux mode (+30dB Gain Boost)
- ◆ Composite output and genlock input
- ◆ Computer control via RS-232C
- ◆ Compatible with JVC KY-F32 series options
- ◆ Remote camera control possible in conjunction with Fujinon pan and tilt head and system controller.
- ◆ Custom video looks can be achieved with the range of manual settings available. These settings control edge detail, grey scale sensitivity, the color of absolute black just to name a few. The RM-LP55 Remote camera controller can adjust these preferences.

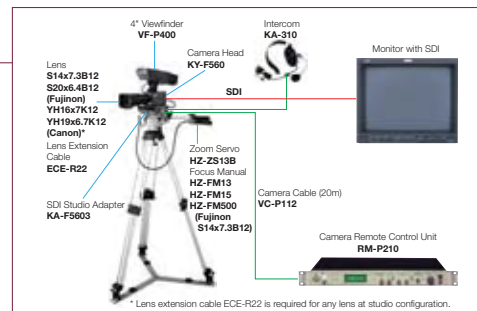
Analog or Digital Outputs

The KY-F560U can be used in analog or digital systems, those with remote controllers or studio configurations. Digital or analog studio applications can be done with the KA-F5603 Studio Kit with SDI interface or KA-F5602 Studio Kit with analog video interface. Both studio camera systems can be complemented by the optional large viewfinder, intercom and remote control. Additionally, the KA-F5601 plug-in SDI camera interface can be useful for remote camera application in conjunction with a remote pan and tilt system.

Studio Camera System

KY-F560U 3-CCD Camera
(Mfr # KYF560U • B&H # JVKYF560U)**4194.95**

AC Adapter for the KY-F560U
(Mfr # AAP700U; B&H # JVAAP700U):
Includes an 8-pin to 8-pin cable to provide the power to the camera.....**49.95**



KY-F560U ACCESSORIES

1/2" Lenses for Lenses



20:1 lens
with 2x extender

17:1 Fujinon Lens

(Mfr # S17X66BRMP) • B&H # FUS17X66BRMP): 17x zoom video conferencing lens with manual zoom, motorized focus and iris.....**999.95**

20:1 Lens with 2x Extender

(Mfr # S20X64BERMSD • B&H # JVS20X64BERM)
A professional ENG 20x zoom lens with a focal-length range of 6.4 to 128mm with a minimum object distance of 3' (12.8 to 256mm with 2x extender).....**6499.95**

20:1 Fujinon Lens

(Mfr # S20X64BRMSD • B&H # JVS20X64BRMS)
A high-quality internal focus video conferencing lens**2999.95**

20:1 Telephoto Remote Control Lens

(Mfr # S20X64BMDDSD • B&H # FUS20X64BMD)
An internal focus 20x semi-servo dual hot-shoe video-conferencing lens**4499.95**

16:1 Canon Lens

(Mfr # YH16X7K12U • B&H # JYH16X7K12U)
16x zoom lens with internal focus. It offers close focus down to about 3' and a wide angle-of-view of 49°**1649.95**

Studio Viewfinder



4" Monochrome Studio Viewfinder

(Mfr # VF-P400U • B&H # JVVFP400U)
A 4" monochrome viewfinder for studio applications, it helps to fully configure the KY dockable series JVC camera heads for studio use. Weighs 4 lbs.....**729.95**

KA-F5601 SDI Output Card

(Mfr # KAF5601U • B&H # JVKAF5601U): An optional SDI video output card, the KA-F5601 is ideal for remote camera applications in conjunction with the remote pan & tilt system**939.95**

KA-F5602 Studio Adapter (Analog Interface)

(Mfr # KAF5602U • B&H # JVKAF5602U): This studio adapter allows the camera to be converted to a studio configuration. Features include a studio viewfinder mount, 26-pin analog component output and power input from any 4-pin XLR power source.....**CALL**

KA-F5603 Studio Adapter (SDI Interface)

(Mfr # KAF5603U • B&H # JVKAF5603U): Studio adapter for the KY-F560U, the KA-F5603U allows for the camera to be converted to a studio configuration. Features include a studio viewfinder mount, SDI uncompressed digital video output for the highest possible image quality, and power input from any 4-pin XLR power source**1879.95**



RM-LP55U Remote Control

(Mfr # KYF550U • B&H # JVKYF550U)
Command all camera functions from a remote location. The RM-LP55U's Setup Menu makes inputting camera settings on the LCD as simple as possible. It takes only seconds to set the eight menu items: Camera Mode, Contour Detail Mode, SC Fine Coarse, H. Phase, Gamma ON/OFF, Auto Iris Detection Mode, Title Display, and Title Edit. The display is backlit, making it easy to operate under all lighting conditions. Data transferred with the remote to the camera stays in the camera even if the remote control is disconnected. Ideal for working with CCD cameras in awkward places, or when dealing with multiple units, the RM-LP55U also has two scene files for storing two sets of camera set-up, which can be readily called up and applied directly to the connected camera**699.95**

RM-P210U Camera Remote Control Unit

(Mfr # RM-P210U • B&H # JVRMP210U)
The RM-P210U is a CCU (Camera Control Unit) with full remote capabilities. Menu parameters allows critical control of the camera head from remote locations, such as a truck or control room from up to 328' away. Compatible with JVC as well as Sony 26-pin CCU cables.



- ◆ Variable Gain Control can be activated and deactivated with a single button. When activated the Gain value can be adjusted in 0.1dB or 1.0dB increments up to 18dB.
- ◆ LCD screen prompts guide you through menu settings. Four programmable function keys enable easy access to frequently used menu items.
- ◆ Two Files (A and B) can be saved for system settings for instant recall.
- ◆ FAS (Full Auto Shooting) automatically adjusts the camera parameters for optimal operation. All you do is zoom and focus.

- ◆ Tally light on the front panel lights when signals are received at the Tally input terminals on the rear panel.
- ◆ Outputs include composite, S-Video, RGB and Y/R-Y/B-Y component
- ◆ Can be configured to operate with an RTS (Ring Tip Sleeve) or 2-wire compatible intercom headset. An intercom level control on the front panel adjusts headset volume.
- ◆ Can be installed in a 19" rack (2RU high)

RM-P210U Camera Remote Control Unit

(Mfr # RM-P210U • B&H # JVRMP210U)**1894.95**



KY-F560U STUDIO SYSTEMS

Analog Studio System for Canon Lenses

- ◆ 1/2" 3-CCD camera (KY-F560U)
- ◆ Studio adapter (KA-F5602U)
- ◆ 4" monochrome studio viewfinder (VF-P400U)
- ◆ Camera control unit (RM-P210U)
- ◆ Rear manual focus control for Canon lenses (HZ-FM15U)
- ◆ Rear servo zoom control for Canon & Fujinon lenses (HZ-ZS13U)

Analog System for Canon (Mfr # SP560C • B&H # JVSP560C).....**9109.95**



Analog Studio System for Fujinon Lenses

- ◆ 1/2" 3-CCD camera (KY-F560U)
- ◆ Studio adapter (KA-F5602U)
- ◆ 4" monochrome studio viewfinder (VF-P400U)
- ◆ Camera control unit (RM-P210U)
- ◆ Rear manual focus control for Canon lenses (HZ-FM13U)
- ◆ Rear servo zoom control for Canon & Fujinon lenses (HZ-ZS13U)

Analog System for Fujinon (Mfr # SP560F • B&H # JVSP560F).....**9109.95**

Digital Studio System for Canon Lenses

- ◆ 1/2" 3-CCD camera (KY-F560U)
- ◆ Studio adapter (KA-F5603U)
- ◆ 4" monochrome studio viewfinder (VF-P400U)
- ◆ Camera control unit (RM-P210U)
- ◆ Rear manual focus control for Canon lenses (HZ-FM15U)
- ◆ Rear servo zoom control for Canon & Fujinon lenses (HZ-ZS13U)

Digital Studio System for Canon Lenses

(Mfr # SP560SDIC • B&H # JVSP560SDIC).....**9795.95**

Digital Studio System for Fujinon Lenses

- ◆ 1/2" 3-CCD camera (KY-F560U)
- ◆ Studio adapter (KA-F5603U)
- ◆ 4" monochrome studio viewfinder (VF-P400U)
- ◆ Camera control unit (RM-P210U)
- ◆ Rear manual focus control for Canon lenses (HZ-FM13U)
- ◆ Rear servo zoom control for Canon & Fujinon lenses (HZ-ZS13U)

Digital Studio System for Canon Lenses

(Mfr # SP560SDIF • B&H # JVSP560SDIF).....**9795.95**

KY-F560U ACCESSORIES

Remote Pan/Tilt and Lens Control



JVC's DPT-115 and 180 remote pan/tilt and lens control system addresses the demanding challenges of remote camera motion control in applications such as churches, boardrooms, council chambers, classrooms, teleconferencing and distance learning. They can connect to JVC's RM-LP55U hand-held camera

control, providing comprehensive adjustment of camera parameters in addition to basic motion and lens control. The system consists of:

DPT-115 Remote Pan & Tilt Head: A lightweight pan & tilt head that can carry a variety of load configurations. Its digital design allows flexibility in lens selection and the adaptability necessary for special requirements. Teleconferencing, ENG and CCTV lenses may all be easily interfaced to this versatile head. Presets are available for pan, tilt, zoom, and focus. The resolution of the presets is 12-bits giving an angular resolution of 0.1°. DIP Switches located at the base of the unit make special functions and configuration changes easily implemented.



180 Digital Control Unit: Provides pan & tilt and lens control for up to 4 remote cameras with 16 presets per camera. A proportional deflection joystick provides pan and tilt control; zoom and focus is accomplished with proportional deflection "Seesaw" controls. These controls allow a slow movement when slightly depressed and a much faster response when fully depressed. An externally accessible DIP switch at the rear of the unit allows pan, tilt, and lens control reversal. The versatile interface of the 180 to the DPT-115 allows a variety of camera/lens combinations to be controlled by a single 180. In addition, options such as iris control or control of more than 4 remote camera sites can be implemented. The 180 features an RS-232 interface and four RS-422 connectors to interface to each of the 4 remote camera sites. Input power is provided by the included wall mounted power supply.



Remote Pan/Tilt & Lens Control (Mfr # PTF180LDC1 • B&H # JVPTF180LCC1) ...**7429.95**

PT-560 CAMERA PAN/TILT PACKAGES

PT560 1-Camera Pan/Tilt Package (Mfr # PT5601 • B&H # JVPT5601)

Includes pan/tilt head (DPT115), 180 control unit, 3-CCD camera (KY-F560U), hand held remote (RM-LP55U), AC adapter (AA-P700U)..... **11,999.95**

PT560 2-Camera Pan/Tilt Package (Mfr # PT5602 • B&H # JVPT5602)

Same as above except with two pan/tilt heads (DPT115), two 3-CCD cameras (KY-F560U), two AC adapters (AA-P700U)..... **19,629.95**

PT560 3-Camera Pan/Tilt Package (Mfr # PT5603 • B&H # JVPT5603)

Same as above except with three pan/tilt heads (DPT115), three 3-CCD cameras (KY-F560U), three AC adapters (AA-P700U)..... **27,259.95**

PT560 4-Camera Pan/Tilt Package (Mfr # PT5604 • B&H # JVPT5604)

Same as above except with four pan/tilt heads (DPT115), four 3-CCD cameras (KY-F560U), four AC adapters (AA-P700U) **34,799.95**

AW-E350 • AW-E650 • AW-E655 • AW-E750 • AW-E860

1/3-, 1/2- and 2/3" CCD 'Convertible' Remote-Controlled Multi-Purpose Cameras

Panasonic's 3-CCD convertible cameras are unique systems, configurable with special function cards to meet a variety of applications ranging from studio to surveillance to sports. System flexibility is additionally enhanced by indoor and outdoor pan/tilt heads, which are controlled by dedicated controllers and RS-232C or RS-422 interfaces. Simple control panels run up to five pan/tilt heads and lenses, and advanced controllers handle up to five systems, while controlling all camera operational and setup functions. The 3-CCD **AW-E350** (1/3" 410,000-pixel C-mount), **AW-E650** (1/2" 4:3 410,000-pixel bayonet mount), **AW-E655** (1/2" 470,000-pixels with motor-driven optical filter wheel for indoor/outdoor shooting), **AW-E750** (economical 2/3" 4:3 470,000-pixels) and **AW-E860** (native 16:9 2/3" 510,000-pixels) are equipped with 12-bit A/D Digital Signal Processing and 12-vector color matrix masking for fine color adjustment and a wide dynamic range (600% for the AW-E750 and E860).



AW-E350

AW-E650

Production System

Studio system can be configured by optional studio card.

Key Points

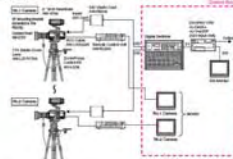
- 3 CCD (2/3", 1/2" or 1/3") high quality camera
- Resolution: 850 lines, S/N: 67 dB (DNR)
- Two types of studio card: Analog (Composite, Component) SDI output card
- Intercom, viewfinder, lens control kit and RCU (remote control kit) can be used for studio system.

Production Studio

Convertible camera can be used for production studio camera by inserting SDI studio card.



SDI high quality camera AW-E350 or AW-E750 with SDI studio card AW-PB000 (with two SDI outputs) can be used for high quality studio camera in production house or broadcast station.



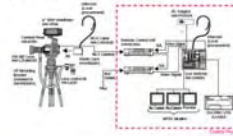
Camera Head AW-E350	2
1/3" Studio Zoom Lens AW-L2175T6A	2
Studio SDI Card AW-PB000	2
4" SW Viewfinder AW-VF04	2
Lens Control Unit AW-LC02	2
Remote Control Unit AW-RC02	2
RCU Cable AW-RCAB02	2
DVCPR0 VTR AW-DV02	1
SDI Input Unit for DVCPR0 VTR	1

College Studio

Simple and cost effective studio system can be configured by inserting Studio Card.



A compact, easy to operate, and low-cost system can be set up by inserting Studio Card into the camera. Perfect for small size studios in schools, companies, etc.



Camera Head AW-E350	2
1/3" SDI Zoom Lens AW-L2175T6A	2
Studio Card AW-PB000	2
4" SW Viewfinder AW-VF04	2
Lens Control Unit AW-LC02	2
Remote Control Unit AW-RC02	2
RCU Cable AW-RCAB02	2
DVCPR0 VTR AW-DV02	1
Line Interface Unit AW-DV02	1
AC Adapter AW-PB000A	1

Event Shooting System

Quite, accurate and high speed pan-tilt motion for event shooting

Key Points

- Compact size camera and pan-tilt head
- Quiet, accurate and high speed pan-tilt head
- Pre-set memory function
- Multi-function control
- Maximum control distance: 3 280 ft (1 000 m)

Parliament/Sports Relay/ Shopping Mall/Hall

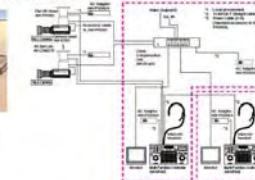


Parliament/Hall

Many cameras and quiet pan/tilt-heads can be controlled from several control rooms.



Convertible camera AW-E750/ E655/E450 can shoot in dark room such as parliament, hall or theater thanks to high sensitivity (Minimum Illumination: 5.009 lx).



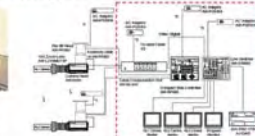
Camera Head AW-E350	5
1/3" Studio Zoom Lens AW-L2175T6A	5
Par-tilt Head AW-PT02	5
AC Adapter AW-PB000A	5
Multi-function Controller AW-MFC02	5
Power Supply AW-PS00A	5
Cable Compensation Unit AW-RC02	5

Religious Production/Sports Relay

Compact size camera and pan-tilt head can be controlled in small event shooting space.



Quiet indoor pan-tilt system with no disturbing noise. The pan-tilt head and camera are compact, as well as extremely quiet. The videographer does not need to move around the hall, and is able to shoot without disturbing the scene. Perfect for wedding ceremonies or churches in which the atmosphere and mood are very important.



Camera Head AW-E350	2
1/3" Studio Zoom Lens AW-L2175T6A	2
AC Adapter AW-PB000A	2
Multi-function Controller AW-MFC02	2
Power Supply AW-PS00A	2
Cable Compensation Unit AW-RC02	2
Compact Line Interface Unit AW-DV02	1
DVCPR0 VTR AW-DV02	1

They incorporate advanced IT CCDs using half-pitch spatial offset technology to deliver an outstanding 850 lines of horizontal resolution, and they are equipped with variable shutter speeds from 1/120 (1/100 on the AW-E860) to 1/10,000 sec. with synchro scan and electronic light compensation. Each offers Panasonic's exclusive Digital Noise Reduction (DNR) technology, as well as digital signal processing to offer precise adjustments such as chroma detail, dark detail and highlight chroma correction.

12 vector color matrix masking for fine color adjustment. Fine camera adjustment such as various types of detail correction and color compensation can be made via the camera menu.

A full line of peripherals including pan/tilt heads, switchers, controllers and feature cards make the cameras compatible for a wide range of uses.

The AW-E350 and AW-E650 feature 66dB/67dB S/N ratios (with DNR on), remarkable minimum illuminations of 0.00015/0.00005 lux, and high sensitivity of f9.5/f11 at 2000 lux respectively.

The AW-E655 (equipped with motor-driven optical filter allowing use as an infra-red camera for use in complete darkness) and AW-E750 feature 65dB S/N ratio (with DNR on), a remarkable minimum illumination of 0.00005 lux and high sensitivity of f11 at 2000 lux.

The AW-E860 features 63dB signal-to-noise ratio, a minimum illumination of 0.4 lux, and high sensitivity of f11 at 2000 lux.

AW-E350 • AW-E650 • AW-E655 • AW-E750 • AW-E860

Brightness Set

- ◆ Picture level or video level adjustment: Convergence level of Auto Iris/AGC/ELC can be adjusted (-50 to +50)
- ◆ Light PEAK/AVG: The ratio of Auto Iris/AGC/ ELC detected peak to average can be adjusted with a predetermined average (P50 –A50)
- ◆ Light Area: Photometric measurement method can be selected for Auto Iris/AGC/ELC. Detect light masked five different ways: All, Center, Top Cut, Bottom Cut and Right/Left Cut.
- ◆ Auto Gain Up: Three settings for automatic Gain-Up control. Low (up to +18dB), High (up to +30dB) and Off.
- ◆ Manual Gain Up: Select up +30 dB gain in 1dB increments
- ◆ Pedestal: Black level of the luminance signal can be set (-30 to +30) – used in adjusting the black levels of two or more cameras
- ◆ Contrast (Gamma): Increasing gamma increases overall contrast, decreasing gamma stretches blacks and improves low light performance – gamma can be adjusted to any of three levels.

Color Set

- ◆ Chroma Level can be increased/decreased to any of three levels each
- ◆ Skin Tone can be increased or decreased to any of three levels each
- ◆ White Balance Settings: ATW, AWC A, AWC B, P Set 3200K, P Set 5600K
- In Auto Tracing White Balance (ATW), white balance is continuously adjusted — ideal for unattended applications
- White Balance setting can be selected from one of two memories (AWC A, AWC B), fine adjustment of white balance can be made after AWC by R/B Gain via the Painting function
- ◆ Highlight Chroma Setting: At low or high, the color dynamic range widens to prevent highlighted white portions from suppression.

G/L Color Bar Set

- ◆ H. Phase can be adjusted (-206 to +49) when genlock signal is supplied
- ◆ Sub Carrier Phase Coarse Adjustment (1, 2, 3, 4)
- ◆ Sub Carrier Fine Phase Adjustment (-511 to +511)
- ◆ Detail Level Setting (Low/High/Off)
- ◆ Color Bars can be adjusted for 0 IRE or 7.5 IRE

Sharpness Set

- ◆ Detail Select Setting (Sharpness/Super Hard).
- ◆ Noise Suppress Level Setting (Low/High/Off) reduces screen noise
- ◆ Clean DNR (Low/High/Off)
- ◆ Detail Flesh Tone Level Settings: Low, Mid, High

Other Set

- ◆ Electronic Shutter modes (Step, ELC, Synchro Scan):
- 7-Speed Selectable: 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000 and 1/10,000 of a second
- Synchro Scan: For shooting computer monitors without vertical scan lines. Shutter speeds adjustable in 1H steps up to 1/253.2 of a second
- Auto ND ELC-Electric Light Control): Use for applications with a fixed iris lens or a lens without an iris, like a microscope.
- ◆ Vertical Resolution (Normal/Fine):
- Normal: CCD storage will be by field storage (normal image)
- Fine: Vertical resolution is increased by using frame storage and 1/60 second shutter speed
- ◆ Selectable baud rate (1200/2400/4800/9600 bps) when controlling the camera from the computer ◆ Negative/Positive switch

	AW-E860	AW-E750	AW-E655	AW-E650	AW-E350
Image Elements	2/3" IT type 3-CCD	2/3" IT type 3-CCD	1/2" IT type 3-CCD	1/2" IT type 3-CCD	1/3" IT type 3-CCD
Lens Mount	2/3" Bayonet Mount	2/3" Bayonet Mount	1/2" Bayonet Mount	1/2" Bayonet Mount	1/3" C Mount
Optical Filter	None	None	1/16ND, 1/64ND, 3200 K, IR Through	None	None
Standard Illumination	2000 lx, F11	2000 lx, F14	2000 lx, F14	2000 lx, F14	2000 lx, F9.5
Minimum Illumination	0.4 lx (F1.7, Night Eye H)	0.005 lx (F1.4) 0.00005 lx (F1.4) 2 sec. CCD accumulation)	0.005 lx (F1.4) 0.00005 lx (F1.4) 2 sec. CCD accumulation)	0.005 lx (F1.4) 0.00005 lx (F1.4) 2 sec. CCD accumulation)	0.015 lx (F1.4) 0.00015 lx (F1.4) 2 sec. CCD accumulation)
Signal to Noise Ratio	65 dB (DNR on)	67 dB (DNR on)	67 dB (DNR on)	67 dB (DNR on)	66 dB (DNR on)
Image Enhancer	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Shutter Speed	Off, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 Synchro-scan ELC				
Gain (Manual)	Max 42 dB 0 to 30 dB in steps, AGC, Night Eye L, H	72 dB 0 to 30 dB in steps, AGC, Night Eye L, H	72 dB 0 to 30 dB in steps, AGC, Night Eye L, H	72 dB 0 to 30 dB in steps, AGC, Night Eye L, H	72 dB 0 to 30 dB in steps, AGC, Night Eye L, H
Iris	Auto (Manual by RCU)				
Video Output	Composite, Component, RGB				
Dimensions (WHD)	3 7/16 x 3 3/4 x 7 9/16", 2.5 lbs	3 7/16 x 3 3/4 x 7 9/16", 2.4 lbs	3 7/16 x 4 1/2 x 7 9/16", 2.6 lbs	3 7/16 x 3 3/4 x 6 1/16", 2.02 lbs	3 7/16 x 3 3/4 x 6 1/16", 1.5 lbs

AW-SERIES CONVERTIBLE CAMERA ACCESSORIES

Lenses for Convertible Cameras

- AW-LZ16ST55:** 16x C-Mount Studio Zoom Lens for AW-E350
(Mfr # AW-LZ16ST55 • B&H # PAAWLZ16ST55)**2,113.95**
- AW-LZ16MD55:** 16x C-Mount Motor Drive Lens for AW-E350
(Mfr # AW-LZ16MD55 • B&H # PAAWLZ16MD55)**2539.95**
- AW-LZ16MD73:** 16x Motorized Zoom Lens for AW-E650 and AW-E655
(Mfr # AW-LZ16MD73 • B&H # PAAWLZ16MD73)**2473.95**
- AW-LZ17ST66G:** 1/2" 17x Studio Lens for AW-E650 and AW-E655
(Mfr # AWLZ17ST66G • B&H # PAAWLZ17ST66)**2119.95**
- AW-LZ17MD9AG:** 17x Motor Drive Lens for AW-E750 and AW-E860
(Mfr # AW-LZ17MD9AG • B&H # PAAWLZ17MD9G)**5149.95**

Lens Control Kits

- AW-LK30 Lens Control Kit:** Controller (Zoom, Focus, Iris) for studio configuration motor drive lenses. (Mfr # AW-LK30 • B&H # PAAWLK30)**CALL**
- AW-LK50 Lens Control Kit:** Semi-Servo rear lens control kit for AW-LZ16ST55 (Mfr # AW-LK50 • B&H # PAAWLK50)**CALL**
- WV-LK36 Lens Control Kit:** Semi-Servo rear lens control kit for AW-LZ17ST66G (Mfr # WV-LK36 • B&H # PAWVLK36)**CALL**

Feature Cards

- AW-PB305A Studio Card:** The AW-PB305A is a studio interface card with RGB, Component, S-Video, and VBS output. 5: EVF (Zebra, safety zone and center marker included), and intercom input and output and tally output compatible. Includes EVF interface bracket.
(Mfr # AW-PB305A • B&H # PAAWPB305A)**779.95**



AW-PB504

- AW-PB504 SDI Card:** The AW-PB504 lets you connect the convertible cameras to any equipment with an SDI input.
(Mfr # AW-PB504 • B&H # PAAWPB504)**1124.95**

- AW-PB506A SDI Studio Card:**
This card features SDI output plus viewfinder connector mounted and intercom jack and intercom audio volume mounted on the EVF interface bracket. Includes EVF bracket.
(Mfr # AWPB506AN • B&H # PAAWPB506AN)**1449.95**

AW-VF64 B&W Viewfinder

- The AW-VF64 is a 4" 4:3 B&W viewfinder suitable for studio configuration with the AW-E350, AW-E650, AW-E655, AW-E750, (AW-E860 in 4:3 mode only). Features center marker accurate framing, over 500 lines of resolution, fixed peaking and tally. Includes mounting bracket and cabling to camera. (Mfr # AW-VF64 • B&H # PAAWVF64)**1199.95**



Cables

- AW-CA50A26 50-pin to 26-pin RCU Cable:** 49' studio (multicore) cable. Connects the convertible cameras with the AW-RC600 controller.
(Mfr # AWCA50A26 • B&H # PAAWCA50A26)**479.95**
- WV-CA26T26 26-pin Male to 26-Pin Female RCU Cable Joint Adapter:** This connector can be used to link the AW-CA50A26 and an WV-CA26U series extension cable for a longer length, or to change genders for specific video applications.
(Mfr # WVCA26T26 • B&H # PAWVCA26T26)**139.95**
- WV-CA26U15 26-pin Male to 26-pin Female Studio Cable:** 49' multicore extension cable extends the distance between the cameras and AW-RC600 controller. (Mfr # WVCA26U15 • B&H # PAWVCA26U15)**CALL**
- WV-CA26U30 26-pin Male to 26-pin Female Studio Cable:** Same as above, except 98'. (Mfr # WVCA26U30 • B&H # PAWVCA26U30)**CALL**
- WV-CA26U100 26-pin Male to 26-pin Female Studio Cable:** Same as above, except 333'. (Mfr # WVCA26U100 • B&H # PAWVCA26U100)**1899.95**
- AW-CA28T9 28-pin to 9-pin RS-232 Pan-Tilt Cable:** 10' serial cable enabling remote computer control of the AW-PH360 pan-tilt head.
(Mfr # AWCA28T9 • B&H # PAAWCA28T9)**194.95**
- AW-CA50T8 Camera Control Cable:** 32.8' cable connects convertible cameras to the AW-CB400 Remote Operation Panel. No pan-tilt (stand-alone). (Mfr # AWCA50T8 • B&H # PAAWCA50T8)**CALL**
- AW-CA50T9 50-pin to 9-pin RS-232 Camera Control Cable:**
A 32.8' RS-232 camera control cable that connects convertible cameras to a PC, enabling remote computer control of the cameras.
(Mfr # AWCA50T9 • B&H # PAAWCA50T9)**CALL**
- AW-CA12T12A Lens Extension Cable:**
Designed for the AW-LZ14ST55 studio lens. Return video studio applications (PAAWCA12T12A)**99.95**
- AW-PS510AN 12v DC Power Supply with Cables:**
Power supply for AW-series convertible cameras. Offers 12v DC for the camera and the pan and tilt control panel used with remote pan and tilt systems. (Mfr # AW-PS510N • B&H # PAAWPS510N)**674.95**

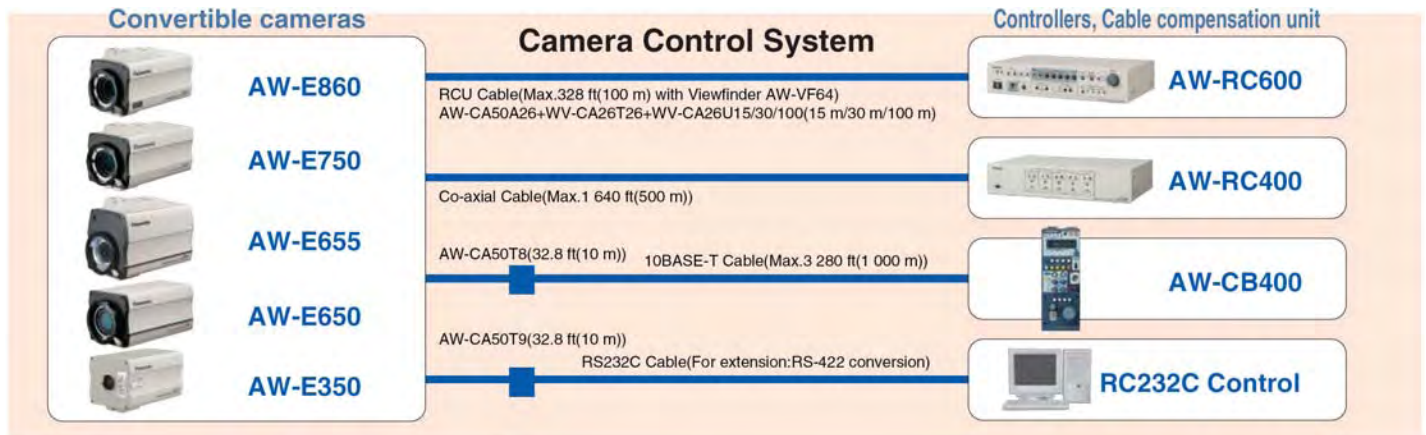
AW-DU600

Public Telephone Line Connecting Adapter/RS-232 Distribution Adapter

- Allows any of the convertible cameras to be remotely controlled from virtually anywhere in the world. With use of a public telephone line, remote control of camera and pan/tilt head movement as well as lens zoom, focus and iris functions can be done through AW-RP555 or RP655 and PC. Can also be used to control up to five sets of cameras and pan/tilt heads. The AW-DU600 has a distribution amplifier feature that can switch among the sets. (Mfr # AW-DU600 • B&H # PAAWDU600)**1505.95**



AW-SERIES CONVERTIBLE CAMERA ACCESSORIES



AW-SW350 Compact Live Switcher

The AW-SW350 is a compact (half rack size) video switcher with 5 composite and S-Video inputs, three program outputs and one preview output. Has an auto take function for automatic wipe and mixes, as well as a T-bar wipe lever for manual wipe and mix transitions. Transition times can be adjusted with a control knob on the panel. Operates on a 12v DC and requires the optional AW-PS505 AC adapter. Switchable 5-channel frame synchronizer/genlock system. The switcher outputs black burst signals so it is also compatible with systems that require genlock. Additionally, the unit integrates color bars, tally signals and intercom inputs and outputs for easy system configuration. (Mfr # AW-SW350 • B&H # PAAWSW350)**3574.95**

AW-RC600 Remote Control Unit (RCU)

For use with a convertible camera (such as the AW-E860, AW-E750, AW-E650, AW-E655 or AW-E350). By connecting the RCU cable, the camera's power supply as well as the camera settings, switching operations and adjustments can be performed by remote control. Basic camera controls on the front panel and full camera control by camera menu. It has a tally/intercom input/output connector, AUX input/output connector (for line viewing) and G/L input/output connector to make it easy to configure a system. Composite, S-Video and component outputs. Also provided are controller connectors for controlling a contact-type pan/tilt head and lens. By using RCU cable (AW-CA50T26) and extension cables (WV-CA26T26, WV-CA26U/15/30/100), the AW-RC600 Remote Control Unit can control a camera at the distance of maximum 328' (with viewfinder AW-VF64). (Mfr # AWRC600 • B&H # PAAWRC600)**1699.95**



AW-RC400 Cable Compensation Unit

The AW-RC400 is capable of providing cable compensation for five analog composite, Y/C or component signals up to 500 meters (when the Belden 8281 connecting cable or its equivalent is used). It features a 5μs advance function for the sync signals in order to provide easy support for a system (another cable compensation unit is required) in which the coaxial cable connected between this AW-RC400 cable compensation unit and the camera is longer than 500 meters. AW-PS505A AC adapter required. (Mfr # AWRC400N • B&H # PAAWRC400N)**1899.95**



AW-CB400 Remote Operation Panel

The AW-CB400 camera control unit offers full camera control (including color matrix, painting, camera matching) of five convertible cameras, a tally/intercom function for each camera and maximum control distance of up to 3280' (1000 meters). Menu items can be selected on the AW-CB400's LCD display to set the functions of the cameras. Also features Gain Function and 4 scene files. AW-PS505A AC adapter required. By connecting the AW-CB400 to the AW-RP400 Pan-Tilt controller using the supplied cable, the convertible cameras mounted on the pan/tilt heads can be controlled. (Mfr # AWCB400 • B&H # PAAWCB400)**1399.95**

AK-HC1500

Multi-purpose, 1080i/720 Switchable 3-CCD HD Box Camera

Compatible with all international HD standards, the AK-HC1500 is a compact multi-format camera tailor-made for assignments ranging from studio use and weather forecasting to live sports and videoconferencing, from scientific image analysis to studio animation. Weighing only 3.3 lbs., the AK-HC1500 features a variable frame rate (4fps to 60fps in single-frame increments) functionality and a CineGamma curve to produce film-like images.

The variable frame rate feature is key to many special effects and sports-related applications. The camera incorporates a 14-bit A/D converter and digital signal processor to deliver crisp, sharp high definition images from dark to bright areas. The one-megapixel, 2/3" 3-CCDs produce outstanding broadcast-quality color accuracy, with improved on-chip lenses to achieve a standard sensitivity of F10 at 2000 lux and a smear level of less than -130 dB.

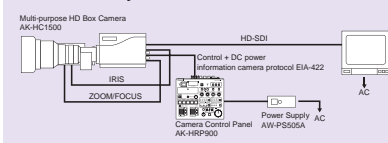


FEATURES

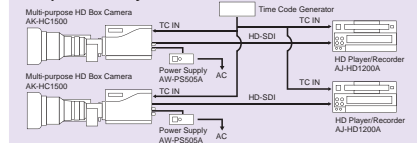
- ◆ Captures 1080 at 24p/25p/30p/50i/59.94i and 60i and 720 at 50p/59.94p and 60p
- ◆ Shoots in variable frame rates (4fps to 60fps in one-second increments) just like a film camera, thereby producing overcranking and undercranking speed effects.
- ◆ A special CineGamma curve allows the CCD to produce the tonal beauty, natural gradation and rich colors like film recordings
- ◆ IT 3-CCD offers on-chip lenses performance (standard sensitivity of f10 at 2000 lux and a smear level of less than -130dB.
- ◆ In addition to the conventional gain-up circuit, the AK-HC1500 uses CCD accumulation and horizontal/vertical addition to create a gain increase of up to +72 dB. This allows shooting in lighting as low as 0.015 lux CCD. Progressive drive minimizes after images from the accumulative drive process.
- ◆ Blue channel sensitivity has been improved approximately 3 dB achieving a better response ratio. Even deep-blue colors can be reproduced with vivid chrominance and significantly reduced noise.
- ◆ Single-channel transfer system and spatial-offset processing technologies improve signal modulation depth, thus reducing moire.
- ◆ The camera has a rear option slot for expansion (e.g., mounting a down converter or analog output unit), making the AK-HC1500 ideal for a broad spectrum of applications.
- ◆ 14-bit A/D converter and adaptive function varies the gamma correction to match the contrast within the image, creating clear, sharp images from dark to bright areas.
- ◆ In addition to the conventional matrix circuit, there is a 12-axis color correction circuit for fine adjustment of saturation and hue. A hue preservation circuit prevents color loss in highlight areas
- ◆ Electronic Extender function used with conventional lens extender magnifies the image by 2x.
- ◆ The remote-controllable AK-HC1500 is compatible with the AW-PH400 (indoor) and AW-PH650 (outdoor) pan/tilt heads, pan-tilt controllers, and camera control units. The optional, compact AK-HRP150 control unit offers full image control.
- ◆ Other features include a standard HD SDI output; genlock; DC (+12V) operation; a mini 15-pin connector; tally function; and iris and zoom/focus controls.
- ◆ Compact design with fewer parts and low power consumption of 18-watts.

SYSTEM EXAMPLE

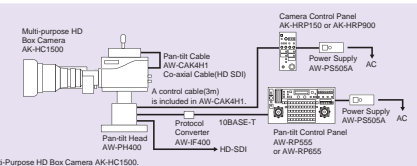
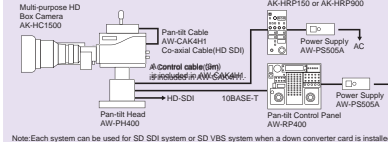
Camera control system



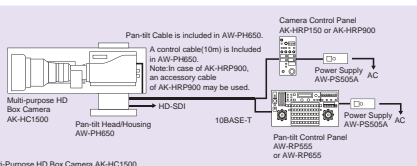
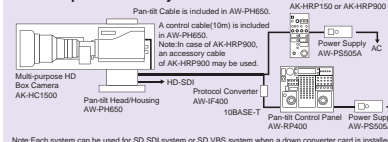
Multiple camera system



Indoor pan-tilt head system



Outdoor pan-tilt head system



PAN-TILT HEADS

AW-PH360N Indoor Pan-Tilt Remote Head

The compact AW-PH360N provides flexible camera operation with a wide pan-tilt range and high-speed control. Its quiet, accurate pan-tilt motion and compact size is perfect for remote studio and event/sports shooting.

- ◆ Pan angle: 300 degrees; Tilt angle: 190 degrees.
- ◆ High performance: Quiet (Under NC30)
Pan speed: (30°/sec) / Tilt speed: (25°/sec)
Accuracy (±3 minutes) (0.05°).
- ◆ Smooth starts and stops with soft landing function assures precise starts/stops.
- ◆ 50 preset memories.
- ◆ Extremely accurate to .25 degrees.
- ◆ Maximum load: 8.8 lbs.
- ◆ Maximum control distance: Pan Tilt Head control 3,280' (from AW-RP655, AW-RP555).
- ◆ RS232C interface.
- ◆ The AW-HP360 requires the AW-PS300A AC adapter.

AW-PH360N Indoor Pan-Tilt Remote Head (Mfr # AWPH360N • B&H # PAAWPH360N)**4099.95**



AW-PH400 High-Performance Pan-Tilt Head

The AW-PH400 High-Speed Pan-Tilt Head has a pan speed of up to 90° a sec., and stop accuracy of maximum 0°, 30 seconds. The AW-PH400 is RS-232C controllable and features 10 trace memories, while retaining a memory of its last position. It operates at a distance of up to 500 meters. The unit will accept MD and RD lenses, and an AC adapter can be installed in the pan-tilt head. Position encoder and prompter outputs are standard. A tally light is available, and a camera rolling unit is optional.

- ◆ The AW-PH400 can be controlled using the AW-RP301, AW-RP305, AW-RP501, AW-RP505, AW-RP605A, or AW-RP400 controllers, or a personal computer.
- ◆ The positions and settings for shooting up to 50 points can be entered as data into the preset memory.

AW-PH400 (Mfr # AWPH400 • B&H # PAAWPH400)**10,649.95**

AW-PH650 Outdoor Pan-Tilt Head

This outdoor pan-tilt head features a waterproof design for stable shooting despite the rain. In addition to zooming, panning and tilting functions, the AW-PH650 also features heater, wiper and defroster functions for the housing that can be controlled by the controller. Perfect for weather camera systems, sports, parliament, halls or theaters.

- ◆ Pan angle: 320° (±160°); Tilt angle: +50°/-90°.
- ◆ Pan & Tilt operation can be performed at speeds of up to 20° per second.
- ◆ Equipment such as a camera and lens with a total weight of 22 lbs. can be mounted on the unit.
- ◆ The shooting positions and settings for up to 50 positions can be registered as preset memory data.
- ◆ Maximum control distance is 3,280'.

AW-PH650
(Mfr # AWPH650 • B&H # PAAWPH650)**19,999.95**



AW-RP555

Compact Multi Hybrid Control Panel

The AW-RP555 is a compact controller capable of operating up to five PTZ cameras or five pan/tilt heads. A strategically placed joystick provides smooth pan and tilt control, with additional buttons available for operating a camera's iris, focus and zoom among other controls. In addition to these manual controls, the AW-RP555 allows for up to 10 preset positions per camera.



- ◆ Controls up to five cameras and five pan-tilt heads
- ◆ Speeds of controls can be adjusted by the angle of the operation lever
- ◆ Separate levers are available for operating a camera's lens zoom and focus. As with pan and tilt operation, the further the lever is pressed the faster zoom and focus operation will be.
- ◆ Full camera control by camera menu
- ◆ 10 pre-set memories per camera. Presets are available for pan, tilt, zoom, focus, iris and white balance.
- ◆ Reverse mode allows an operator, for any number of reasons, to reverse the direction of a particular control. For example, by switching from normal to reverse, a left to right movement on the unit will cause the camera to go from right to left.
- ◆ Requires AW-PS505A AC adapter
- ◆ Maximum control distance from pan tilt heads to controller is 3,280'.
- ◆ By using the AW-IF400 protocol converter, the controller can control the AQ-PH400 Pan-tilt Head.
- ◆ The controller can be put on a desk or mounted in a rack. The position of input and output connectors can be changed by 90°.

AW-RP555

(Mfr # AWRP555 • B&H # PAAWRP555) **1659.95**

AW-RP655 Multi-Function Controller



Desktop or rackmounted, the AW-RP655 is capable of controlling up to five cameras or up to five pan/tilt heads without hub unit. Two ergonomically designed joysticks, one on each end of the unit, provide ultra smooth pan, tilt, zoom and iris and focus operation. In addition to these basic camera controls, this unit features 50 preset positions. It offers up to 300 seconds of tracing memory and is capable of reversible motion direction. For expansion purposes, the AW-RP655 will accept two additional controllers. The AW-PH360 and AW-PH-650 pan/tilt units can be controlled right out of the box while the AW-PH400 requires the optional AW-IF400 protocol converter.

- ◆ Controls up to five cameras and five pan/tilt heads without hub unit. Also controls camera functions and picture quality. Relatively easy to match pictures of each camera and camera conditions.
- ◆ Full camera control by menu on LCD panel
- ◆ Control speed can be adjusted by angle of the operation lever and high/low speed can be switched.
- ◆ Maximum control distance of 3280' to AW-PH360, AW-PH650 pan-tilt heads. Can also control the AW-PH400 by using the AW-IF400 protocol converter. Video signals over 300' require the AW-RC400.
- ◆ Motion direction of the operation lever can be reversed
- ◆ A built-in memory function stores up to 50 preset positions for each of the five cameras for a total of 250 preset positions. Memory functions includes pan, tilt, zoom, focus, iris and white balance control.
- ◆ Two ergonomically designed joysticks, one on each end of the unit, allow a user to use both hands to operate a receiver's PTZ functions. The one on the right is used to control a camera's pan and tilt function while the left joystick provides zoom, iris and focus operation.
- ◆ Tracing Memory allows the operator to program critical path moves —moving a camera around a predetermined area for a certain period of time. Up to 10 tracing presets can be programmed for each camera with a maximum of 300 seconds allowed for the combined cameras.
- ◆ Rack mountable or desktop operation
- ◆ RS-232C interface for PC control
- ◆ AC adapter AW-PS505A is required.

AW-RP655

(Mfr # AWRP655 • B&H # PAAWRP655) **4196.95**

AW-RP400

High Performance Pan-Tilt Controller

The AW-RP400 is a high performance controller with professional and easy to use controls, along with reverse-polarity dual joysticks, providing precise and extremely accurate access to the AW-PH360 and PH400 pan-tilt heads and full camera CCU control.

Complementing the PH400 and PH360, the AW-RP400 Pan-Tilt Controller offers a changeable zoom/focus controller (joystick/seesaw), 50 preset positions per camera, five pan-tilt heads control, Zoom/Focus/Pan/Tilt speed control, a Tally/Intercom function, and 10 minutes of unique tracing memory. The AW-RP400 offers a SD memory card slot to save settings to a postage stamp-size SD memory card. It has a maximum control distance of more than 1640' (500 meters), and is also RS-232C controllable.



- ◆ Changeable zoom/focus controller (joystick/seesaw).
- ◆ Joystick with camera roll control and speed control knobs for pan, tilt, zoom, iris, focus.
- ◆ 50 pre-set positions.
- ◆ 5 pan-tilt heads control (by installing an additional control panel, two of the five units in the pan/tilt head system can be controlled at the same time).
- ◆ Zoom/Focus/Pan/Tilt speed control.
- ◆ Tally/Intercom function.
- ◆ 10 minutes tracing memory (60 seconds x 10 positions).
- ◆ RS-232C interface.
- ◆ Maximum control distance of 1640' or 3,280' using the AW-IF400 Protocol Converter.
- ◆ By connecting the AW-CB400 remote operation panel to the control panel, the convertible cameras mounted on the pan/ tilt heads can be controlled at the same time.
- ◆ Cross control by two controllers.
- ◆ +DC12v operation (AW-PS505A AC adapter is required).

AW-RP400

(Mfr # AWRP400 • B&H # PAAWRP400).....**5099.95**

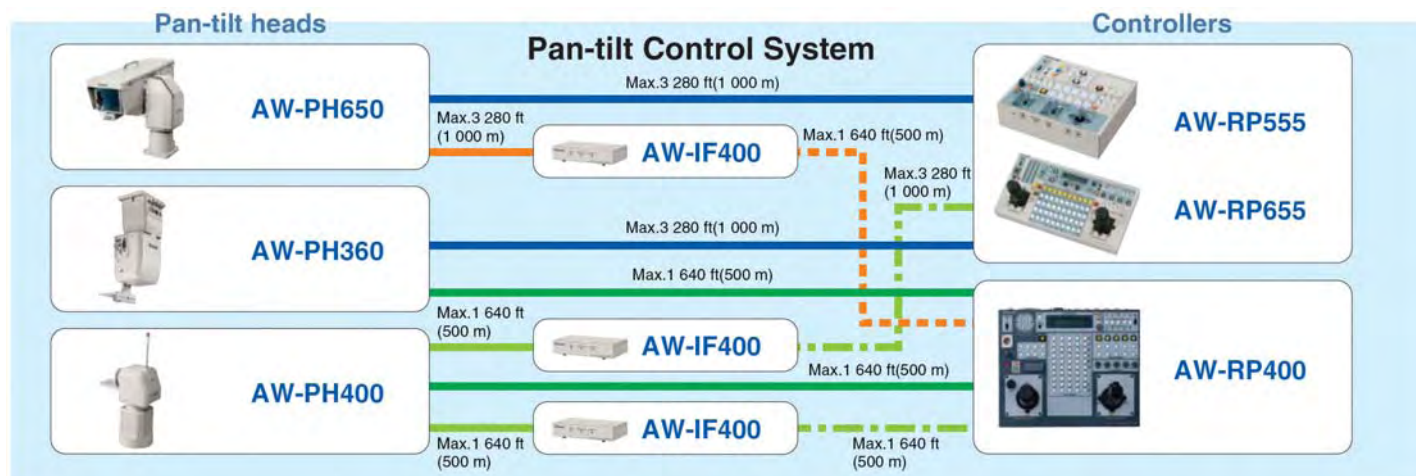
AW-IF400 Protocol Converter

The AWIF-400 allows specific controllers to operate various pan and tilt systems from long distances. For example the AW-PH400 indoor pan-tilt head can be controlled by the AW-RP555 or AW-RP655 controllers using the AWIF-400 protocol converter. Requires AW-PS505A AC Adapter.

- ◆ The AW-PH650 outdoor pan-tilt head can be controlled by the AW-RP400 controller by using this protocol converter.
- ◆ By using the AW-IF400 the control distance between AW-PH400 and the AW-RP400 can be extended by a maximum distance of 3280'.



AW-IF400 (PAAWIF400).....1079.95



AW-HE100

Multi-Format HD/SD Camera with Integrated Pan/Tilt Zoom

The AW-HE100 is an integrated HD/SD camera offering outstanding broadcast-quality video with smooth pan/tilt/zoom operation and easy system configuration. Featuring an elegant ergonomic design, the AW-HE100 has a True Servo pan-tilt head that provides precise, fast and fluid movement, with an exceptional range of 350° pan and 250° tilt. With three 1/3" CCDs, a fast f1.6 zoom lens, 19-bit video processing DSP (digital signal processor) and 14-bit A/D converter, the camera produces exceptional high definition images in a variety of lighting conditions and environments.

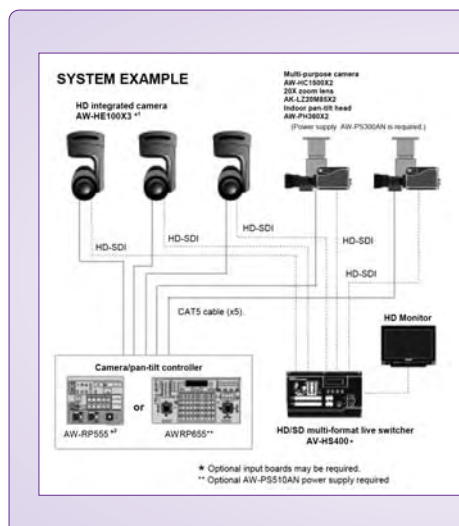
Perfect for applications that require a simple, cost-effective high definition robotic camera solution, the AW-HE100 is designed to be easily integrated into auditoriums, classrooms, houses of worship and sports venues as well as for use in videoconferencing, broadcast and event production. The standard configuration includes HD/SD analog component and composite video outputs, RS-422 and IR remote control, and it is compatible with all of Panasonic's current pan-tilt camera control systems.



FEATURES

- ◆ High-quality 1080i, 720p or 480i switchable output. Simultaneous HD and SD outputs.
- ◆ Three 1/3" high sensitivity progressive IT CCDs delivers superb picture quality.
- ◆ Picture quality is maximized through the use of Panasonic LSI with 14-bit A/D and 19-bit versatile video processing.
- ◆ True-Servo pan-tilt head provides smooth, fast, quiet, on-screen moves. Exceptional pan-tilt performance specs include a 60° per second pan-tilt speed, ±175° pan range, and -40° to +210° tilt angle range. The unit has a quiet noise rating of NC30 at 30°/s motion.
- ◆ Broadcast quality 13x HD zoom lens with a fast f1.6 aperture and a 32.5mm (35mm equivalent) minimum focal length for wide angle shooting and superior HD video.
- ◆ Can be easily mounted on a ceiling, or placed on a wall mount or pedestal to meet your installation and space requirements.
- ◆ Switchable Smart Flip feature automatically flips the picture (with no glitches) when camera tilts beyond a selected point.
- ◆ Automatic white balance with ATW, variable gain (0 -18dB) and AGC, up to 100 pre-set memories, 3-step gamma correction, 7-step chroma level adjustment, electronic shutter with synchro scan and tally light.

- ◆ The AW-HE100 comes standard with a variety of outputs including HD/SD analog component and composite video and is equipped with RS-422 connectivity for precise remote control. An optional HD/SD SDI card is available for critical production applications.



The AW-HE100 can easily be integrated with Panasonic's AK-HC1500 convertible HD camera and SD convertible cameras, and is compatible with a wide range of professional RS-422 control systems including Panasonic's pan-tilt controllers such as the AW-RP555, AW-RP655, and AW-RP400 (with the AW-IF400), to provide control from remote distances of up to 3,280'. Can also be easily controlled via a desktop or laptop computer. Easy integration - simply connect with a regular 15-pin to BNC breakout cable and a Cat 5 control cable. Included wireless remote can control up to four AW-HE100 integrated cameras.

AW-HE100 Multi-Format Camera with Integrated Pan/Tilt Zoom: Includes ceiling mounting bracket and wireless remote control (Mfr # AW-HE100 • B&H # PAAWHE100) **8499.95**

HD/SD-SDI Output Board for the AW-HE100: Provides two HD/SD-SDI outputs (BNC) for HD/SD switching (Mfr # AW-HHD100 • B&H # PAAWHHD100) **1959.95**

DXC-C33

3-CCD Color Video Camera

Ideal for use in space-limited locations, the DXC-C33 incorporates one of the smallest/lightest camera head units featuring three CCDs. In spite of its compact and lightweight camera head unit, this camera inherits the superb picture quality of the DXC Series. The DXC-C33 boasts 850 lines of horizontal resolution and minimum illumination of 2000 lux at F8. A powerful digital signal processor allows great image quality with DynaLatitude and Partial Enhance, special features usually found on high-end broadcast equipment. It is also equipped with a DV output terminal, which allows signals to be recorded directly to i.LINK interface-equipped VCRs with no quality deterioration. With excellent features and UL-2601 medical approval, the DXC-C33 is also the ideal choice for medical, research and industrial microscopy applications.



FEATURES

- ◆ The camera is made up of two pieces: the camera head that takes C-mount lenses, and the CCU (camera control unit), a control box that gives access to the various video parameters and the on-screen menu system. The two pieces are connected by optional cable up to 90' away.
- ◆ The DXC-C33 can be installed in locations with limited space. Incredibly small, the camera head unit measures just 1 1/16" x 1 1/2" x 1 5/8" (WHD) and weighs 1.7 oz.
- ◆ The DXC-C33 uses three 1/3" CCDs to clearly capture detailed images of objects. Allows the camera to realize sensitivity of 2000 lux at F8, 62dB S/N ratio and achieve 850 lines of horizontal resolution. Also captures superior pictures by adopting full 10-bit Digital Signal Processing (DSP).
- ◆ DV output terminal allows image recording into i.LINK interface-equipped VCR with no quality deterioration.
- ◆ DynaLatitude function automatically adjusts contrast corresponding to the brightness signal level of the entire image. Clear images can be captured if both bright and dark areas exist within an image.
- ◆ Partial Enhance function allows a particular color to be selected, and its hue, saturation and detail altered. In addition, the detail produced by the high resolution of the camera can be softened or emphasized in certain parts of the image by the Partial Enhance function.
- ◆ AE (Automatic Exposure) determines the best area for incoming light metering. Users can select and set up two of the six different AE modes (multi, large, medium, spot, slit, manual selectable) and can easily switch them at front panel.
- ◆ AE speed (fast, mid, slow selectable); AE detect (average/peak selectable)
- ◆ Built-in frame memory can provide a freeze image and a remarkably enhanced image in sensitivity by long-time exposure function. Images captured by long-time exposure function can be output continuously.
- ◆ White balance modes include: AWB, ATW Normal or Wide, Manual, 3200°K/5600°K selectable, AWB or ATW R/B Paint, Manual R/B Gain.
- ◆ User-friendly front control panel is easy to use with smartly arranged knob switches and good-sized switches.
- ◆ High speed electronic shutter (8 to 1/100,000 of a second)
- ◆ RS-232 interface allows control of the camera by an external computer.
- ◆ External synchronization (HD/VD, VBS) allows for multiple camera operation.
- ◆ Positive/negative edge trigger selectable; on/off Gamma (variable at on)
- ◆ Two user files (A/B switchable)
- ◆ Positive/negative edge trigger selectable
- ◆ Gain up modes include STEP (0 to 24dB in 1 dB steps; AGC and Hyper (up to 30dB).

DXC-C33 Camera and Accessories

DXC-C33: 3-CCD Color Camera Head and CCU (Mfr # DXCC33 • B&H # SODXC33)	4529.95
RM-C950: Remote Control Unit (Mfr # RMC950 • B&H # SORMC950)	CALL
CCXC-9DBUS: 16' RGB Cable (SOCCXC9DBUS): 9-pin D-sub to 5 BNCs (RGB, Sync, Video)	CALL
CCXC-9DDUS: 16' RGB Cable (SOCCXC9DDUS): 9-pin D-sub to 9-pin D-sub	CALL
DV Cable: 4.9' FireWire 4-pin to 6-pin DV Cable (Mfr # VMCIL4615 • B&H # SOVMCIL4615)	24.99
CCMC 20-pin Multi Cables to connect the camera head to the CCU:	
16.5' Cable (Mfr # CCMC20P05 • B&H # SOCCMC20P05)	449.95
33' Cable (Mfr # CCMC20P10 • B&H # SOCCMC20P10)	623.50
100' Cable (Mfr # CCMC20P30 • B&H # SOCCMC20P30)	1132.95

DXC-390 • DXC-990

3-CCD Color Video Cameras

The DXC-390 (1/3") and DXC-990 (1/2") are DSP 3-CCD color video cameras that incorporate Sony's Exwave HAD technology to greatly improve camera sensitivity while reducing smear. The DCX-390 uses a C-mount lens and features 800 lines of resolution, 62dB S/N ratio, and sensitivity of f8 at 2000 lux. The DXC-990 uses a bayonet mount and features 850 lines of resolution, 63dB S/N ratio, and sensitivity of f11 at 2000 lux.

They are equipped with component (DXC-990 only), RGB, composite and S-Video outputs, and all functions can be easily controlled from their rear panel.

They can also be controlled via the optional RM-C950 Remote Control or by computer via the RS-232 port.

The DCX-390 and DXC-990 are ideal for applications such as microscopy, industrial inspection, machine vision and remote camera systems, where picture accuracy and detail are important. Incorporating 10-bit DSP technology, a user friendly on-screen menu allows for simple control of various features including a DynaLatitude function, Partial Enhance, and a wide selection of Automatic Exposure (AE) modes.



DXC-990

FEATURES

Superior Picture Quality

- ◆ Incorporating three 1/3" IT CCDs, the DXC-390 delivers 800 lines of resolution and a S/N ratio of 62 dB. Featuring Sony's ExwaveHAD technology and advanced video processing, the DXC-390 provides excellent sensitivity (f8 at 2000 lux) and low smear levels.
- ◆ Incorporating three 1/2" IT CCDs, the DXC-990 delivers 850 lines of resolution and a S/N ratio of 63 dB. Featuring Sony's ExwaveHAD technology and advanced video processing, the DXC-990 provides excellent sensitivity (f11 at 2000 lux) and low smear levels.
- ◆ In addition to capturing images with the highest quality—even in difficult lighting conditions, they also incorporate DSP (Digital Signal Processor) technology, resulting in images with higher picture quality and color accuracy.

DSP (Digital Signal Processing)

- ◆ The DXC-390 and DCX-990 incorporate Sony 10-bit DSP technology. DSP enables a variety of enhancement features and increases picture reliability. They have several DSP functions for powerful picture controls.

Picture Contrast Controls



DynaLatitude Function:

Automatically adjusts contrast corresponding to the brightest signal level of the entire image. Clear images can be captured if both bright and dark areas exist within the image.

Black Stretch: Black stretch/compress enhances the gradation of the dark area by stretching or compressing the range of the image.

DCC + (Dynamic Contrast Control Plus):

Avoids hue factor distortion that can occur when subjects are very bright. DCC+ also automatically adjusts the knee point according to the contrast of the image.

Knee Control:

By adjusting the knee, a knee point and knee slope are set so that the highlighted areas of the picture can be clearly reproduced. High/Normal/Low switchable.

Picture Enhance Controls

Digital Detail:

Adjusts the sharpness of the object outline with minimal noise. This feature also enables horizontal detail frequency control.

Linear Matrix:

Provides sophisticated electronic adjustment for accurate color reproduction by adjusting color saturation and hue.

Partial Enhance:

Allows a particular color to be selected, and its hue, saturation and detail altered. In addition, the detail produced by the high resolution of the camera can be softened or emphasized in certain parts of the image by the Partial Enhance function.



Partial Enhance OFF ►

DXC-390 • DXC-990

CCD Integration Modes

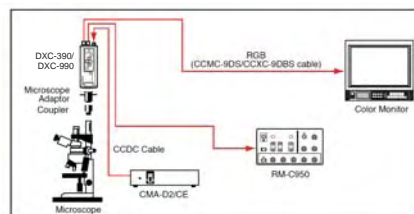
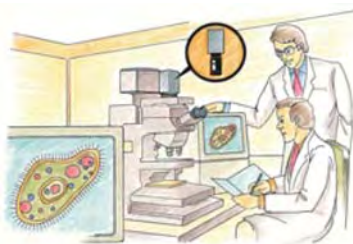
- ◆ Switch between Field or Frame CCD Integration modes using the function menu buttons on the camera, or by using the optional RM-C950 Controller.
- Field Integration is effective for capturing moving objects. Since the charge is only integrated over one field (1/60 of a second), motion blur is reduced.
- Frame Integration mode on the other hand, integrates the charge of each horizontal pixel line for 1/30 of a second, resulting in higher vertical resolution than Field Integration. Frame Integration mode is ideal for use in still image capture.

Electronic Shutter Functions

- ◆ A variable speed electronic shutter is built into the CCD imager, making it possible to capture blur-free, clear images of high speed moving objects. They feature 11 different shutter speeds (OFF to 1/100,000), including flickerless mode.
- ◆ CCD Iris function automatically controls exposure by electronically adjusting for incoming light levels. It is equivalent to six f-stops in lens iris and is effective in microscope applications. It enables them to adjust the incoming light level automatically, even when using a less costly microscope adapter without Auto Iris level control. When the CCD Iris function is used with an auto iris lens and AGC (Automatic Gain Control) function, an even wider range of incoming light levels can be accommodated.
- ◆ Clear Scan feature eliminates the horizontal bands that appear across the screen when shooting a computer display. This is achieved by matching the camera shutter speed with the display scanning frequency. Clear Scan allows shutter speeds to be changed from 260/525 to 1/525 H in 1H (63.5us) steps, or by an eight-step speed selection — ideal for shooting computer monitors without flicker scrolling across the screen.
- ◆ Shutter speed (charge accumulation time) is selectable from 1 to 255 frames (field mode) or 2 to 256 frames (frame mode) in one frame steps. This Long Term Exposure function provides remarkable enhancement in sensitivity by accumulating the charge on the CCDs over a longer time than normal, allowing dark objects to be clearly recorded.

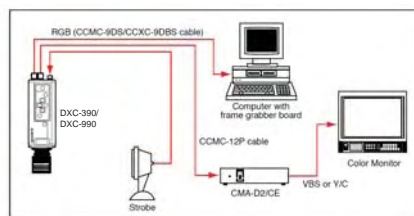
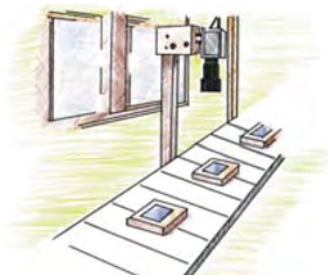
With so many functions, the DXC-390 and DXC-990 are perfect for a variety of applications.

MICROSCOPY



Useful DXC-390/990 functions include: DynaLatitude, Digital Detail, Partial Enhance, Color Shading Compensation

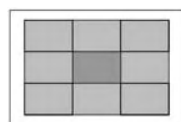
INDUSTRIAL INSPECTION



Useful DXC-390/990 functions include: Strobe trigger function, WEN output, RGB sync, RS-232C Interface, Extended Genlock (VBS GENLOCK and HD/VD In/Out)

AE (Automatic Exposure)

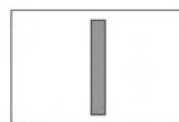
AE automatically controls the level of brightness by varying the exposure times. This is done by combining the CCD IRIS function, AGC (Automatic Gain Control), and Auto Iris function of the lens. The DXC-390 and DXC-990 are equipped with a number of convenient AE modes:



MULTI



MID



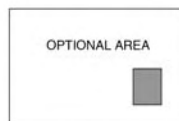
SLIT



LARGE



SPOT



MANUAL

AE Level: Adjusts the standard brightness level by up to +/- one F-stop in a lens iris.

AE Speed: Selectable AE (Auto Exposure) conversion speed to suit applications under varying lighting conditions.

AE Area: AE Area is a light metering system that includes six different modes.

DXC-390 • DXC-990

White Balance Control

- ◆ Three white balance control modes: AWB, ATW and Manual (R/B Gain). AWB and ATW can be readjusted more precisely with R/B Paint function.
- ◆ AWB (Auto White Balance): For easy setup, automatically white balances the camera and memorizes adjusted settings.
- ◆ R/B Paint: When you are not content with the automatic white balance adjustments from the AWB or ATW mode, the white balance can be readjusted more precisely using the Red and Blue level controls.
- ◆ ATW (Auto Tracing White Balance): Adjusts the white balance automatically, in response to the varying light conditions.
- ◆ Manual (R/B Gain): White balance can be adjusted manually using the Red and Blue Gain level controls in accordance with your requirements.

Additional Features

- ◆ Extended genlock (VBS Genlock and HD/VD in/out) capability allows for synchronization with video or blackburst signals from other equipment.
- ◆ Synchronization capabilities (Strobe function, WEN output) realizes full vertical resolution of fast moving objects.
- ◆ Scene Files: The preset files are set to accommodate four different situations (Standard/Microscope/Full Auto/Strobe). Copying the settings between two files is also possible (File A/B).
- ◆ User Files: Allows user to set two custom parameters in the menu for instant recall.
- ◆ High sensitivity mode—Hyper Gain (+30 dB) is available for shooting objects in very low light conditions.
- ◆ Color Shading compensation allows for verification of color on a microscope.
- ◆ RS-232C port allows easy control and operation of the camera by an external computer is possible.
- ◆ The DXC-990 is equipped with a bayonet mount so it can adapt various kinds of high quality, professional lenses. Bayonet mount lenses include higher sensitivity and lower color shading than C-mount lenses. A hot-shoe connection is also provided to eliminate the need for a lens-to camera interconnecting cable, providing easy remote control of zoom, focus and iris functions.

RM-C950 Remote Control Unit for the DXC-390 and DXC-990

The RM-C950 operates all functions on the DXC-390/990's rear panel, along with Zoom, Focus and Iris functions from up to 10' away, via the RS-232 interface on the cameras and supplied 10' cable. Frequently used camera functions, such as Gain, Detail, Master Pedestal and Red and Blue Gain, are easily controlled by simply turning a knob (there is no need to display the menu screen on a monitor). The RM-C950 is especially useful in microscope applications, because you can adjust the image while concentrating on the pictures. A Freeze button is provided to capture a still image of moving objects.



- ◆ 19' rack mountable
- ◆ Supplies DC power with a CCDC cable to the camera
- ◆ Transmits DC power and video/sync signals between the camera and the CMA-D2 adapter with CCMC 12-pin cable
- ◆ Maximum cable length: 100 meters with CCDC-100A cable
- ◆ 25 meters with CCMC-12P25 cable

RM-C950 Remote Control Unit (Mfr # RMC950 • B&H # SORMC950).....**CALL**

CMA-D2 and CMA-D3 Camera Adapters

These adapters supply DC power and transmit video sync signal between the adapter and the DXC-990 with CCMC 12-pin multi-cable or CCDC power cables using the CMA-D2; or with CCZ-A and CCMC-3MZ cables using the CMA-D3. The CMA-D3 can also connect with the RM-C950 and offers composite, S-Video, RGB or component output.

RGB Cables for DXC-390/990

CCXC-9DBUS 16' RGB Cable (SOCCXC9DBUS): 9-pin D-sub to 5 BNCs (RGB, Sync, Video).....**CALL**
CCXC-9DDUS 16' RGB Cable (SOCCXC9DDUS): 9-pin D-sub to 9-pin D-sub.....**CALL**
CCXC-9DSUS 16' RGB Cable (SOCCXC9DSUS): 9-pin D-sub to 4 BNCs (RGB, Sync) and Y/C.....**CALL**

CCMC12P 12-pin Multi Cables

12-pin cables carry video, 12v DC power and HD/VD external sync between the DXC-390/990 camera and CMA-D2 camera adapter.

CCMC-12P02 (SOCCMC12P02U): 6' cable.....**CALL** **CCMC-12P05** (SOCCMC12P05U): 16' cable.....**CALL**
CCMC-12P10 (SOCCMC12P10U): 33' cable...**199.95** **CCMC-12P25** (SOCCMC12P25U): 82' cable.....**CALL**

CCDC DC Power Cables

12-pin female to 4-pin male cables, transmits 12v DC power between the DXC-390/990 cameras and the CMA-D2 camera adapter.

CCDC-5 (SOCCDC5US): 16' cable.....**CALL** **CCDC-10** (SOCCDC10US): 33' cable.....**CALL**
CCDC-25 (SOCCDC25US): 82' cable.....**CALL** **CCDC-50A** (SOCCDC50A): 164' cable.....**CALL**
CCDC-100A (SOCCDC100A): 328' (100m) cable.....**CALL**

CCMC-3MZ Camera Cable for use with CMA-D3

9' 26-pin breakout cable for the DXC-390/990. It has a 26-pin connector on one side and breaks out to a 12-pin, 9-pin D-Sub, 8-pin Mini Din and BNC connectors. Includes CCZZ-1E adapter for connecting to Sony's CCZ 26-pin cables (B&H # SOCCMC3MZ).....**269.95**

HDC-X300 • HDC-X310

Compact, Multi-purpose HD Cameras

Designed for high-quality and portable acquisition in a wide range of applications, the HDC-X300 and HDC-X310 incorporate three 1/2" 1.5-megapixel HD CCDs to offer high resolution, high sensitivity, and high S/N characteristics. Packing this performance into an extremely compact chassis, the cameras offer advanced features such as progressive scan modes, slow shutter, and auto-focus capabilities. Convenient remote control is also available

using the optional RM-B150/B750 Remote Control Unit or MSU-900/950 Remote Control Panels.

The HDC-X300 comes equipped with an HD-SDI output on its rear panel, and is the preferred choice for HD-exclusive operations. The HDC-X310 steps up with more interface and operational flexibility via use of its HFU-X310 signal interface unit, connected via a fiber optical cable. This interface unit offers a variety of optional interface boards to cover a range of signal formats, including HD-SDI and SD-SDI, and HDV via the i.LINK interface, as well as computer XGA output. Combined with their compact designs, suitable for both indoor and outdoor use, the HDC-X300 and HDC-X310 are the ideal choice for an extensive range of HD image acquisition applications - from large-screen displays, production, PoV (Point of View), studios, surveillance, image processing, microscopy, and much more.



HDC-X300/X310 shown with optional HKC-SV1 attached

FEATURES

Superb Image Quality

- ◆ They incorporate three 1/2" 1.5-megapixel HD CCDs, to offer outstanding-quality images with a low smear level of -120 dB and a high S/N ratio of 52dB.
- ◆ Incorporating Sony's innovative Advanced Frame Accumulation (AFA) technology, the HDC-X300/X310 can output progressive HD signals (25PsF/29.97PsF), 2-3 pull downconverted signal from 23.976PsF (59.94i) in addition to interlaced HD signals (50i/59.94i). Interlace and progressive modes can be easily selected from the camera setup menu.
- 50i output mode: 50i or 25PsF selectable
- 59.94i output mode: 59.94i/29.97PsF/23.976PsF (with built-in 2-3 pull-down function) selectable

Flexible Image Controls

- ◆ They provide highly advanced image-control functions such as matrix, a TruEye feature, skin-tone detail, and color temperature controls. These functions allow creative images to be produced with high clarity.

Auto-Focus Function

- ◆ While maintaining compatibility with interchangeable manual focus lenses, the HDC-X300/X310 come packaged with a convenient auto-focus lens. The lens has two selectable auto-focus modes: One-push auto-focus readjusts the focus each time the button is pressed, while auto-tracing focus automatically tracks the focus in a dynamic manner.

Low-Light Shooting

- ◆ The HDC-X300/X310 offer two convenient functions for capturing clear images in low-light environments - a Slow Shutter mode and a Gain function - which can be used separately or together.
- The Slow Shutter mode allows the charge accumulation period of the CCD (typically 1/60 or 1/50 of a second) to be extended up to approximately two seconds (64 frames).
- The Gain function allows the camera gain to be boosted to +48 dB. When these functions are used together, the camera offers a stunning minimum illumination of 0.003 lx.

Trigger Function

- ◆ Two types of trigger modes are available with the HDC-X300/X310, allowing synchronized operation with external equipment.
- The flash trigger input mode allows the camera to capture a high-quality still image when synchronized with an external flash - a function suited for photo-booth or document-stand applications.
- Another trigger mode is the 23.976PsF frame lock mode. When the HDC-X300/X310 is set to 23.976PsF progressive mode, the camera outputs a 2-3 pull-down trigger signal for frame locking to other HDC-X300/X310 cameras.

Remote Control Capability

- ◆ The HDC-X300/X310 are compatible with the RM-B150/B750 Remote Control Unit, RCP-700 Series Remote Control Panel and MSU-900/950 Master Setup Unit. These remote controllers cover the complete range of control parameters that the HDC-X300/X310 provides, from basic camera control to sophisticated operations.

HDC-X300 • HDC-X310

ND Filter and CC Function

- ◆ Optimum light and color control is easily achieved using the built-in optical Neutral Density (ND) filter wheel and electronic color correction (CC) function. The HDC-X300 and HDC-X310 use electronic color correction to eliminate the need for optical color correction filters. This allows all filters on the filter wheel to be ND types, providing the operator with greater flexibility in depth of field and exposure control.
- ◆ The optional HKC-SV1 servo unit allows the optical ND filters of the HDC-X300/X310 to be controlled remotely from the RM-B750 or RM-B150 Remote Control Unit, RCP-750 or RCP-751 Remote Control Panel, or MSU-900 or MSU-950 Master Setup Unit.

Compact and Lightweight

The HDC-X300/X310 are designed to be compact and lightweight, making them ideal for capturing HD-quality images at locations and from angles where bulky production HD cameras cannot be installed. They weigh only 2 lb. 10 oz. (1.2 kg), allowing easy installation in space-constrained and awkward areas such as on a crane head or helicopter. The supplied tally unit can be easily detached from the camera body, minimizing the camera size to be fitted in, for example, a pan/tilt head or an underwater housing.

A range of features and system flexibility make the HDC-X300 and HDC-X310 cameras suitable for virtually any general application. The following are typical examples:

News Studio

In addition to camera settings, pan/tilt/zoom operations can be controlled remotely from third-party pan/tilt systems, allowing the HDC-X300/X310 cameras to be easily integrated into an automated news studio.



Live Events

When displayed on large projection systems, the high-clarity HD images captured by the HDC-X310 camera provide impressive viewing of live events. And by use of the Sony AWS-G500 Anycast Station Live Content Producer, these stunning images can be seamlessly integrated with an array



of PC sources on the screen projection.

Image Processing

The HDC-X300/X310 system can capture high resolution progressive images - ideal for a range of image-processing applications such as microscopy and general inspections.



Church Production

Although the HDC-X300/X310 offers high quality HD images, they are designed to be as compact as possible. This enables them to be installed discretely in many locations such as houses of worship, halls, and conference rooms.



HFU-X310 Optical Interface Unit

The HFU-X310 is a 2U-high, half rack width unit with an optical fiber interface. Digital data - including external sync, Bi-directional RS-232C Pan & Tilt and camera control signals - can be transmitted between the HDC-X310 and the HFU-X310 via a single mode optical fiber cable with LC connector. This cable can be up to 1000 meters (3280') long, which allows the camera to be installed virtually anywhere required.

The HFU-X310 is equipped with a range of interfaces such as HD-SDI input, SD/HD genlock, and tally inputs. It also provides an 8-pin serial remote input to connect the RM-B750/B150, RCP-700 Series, or MSU-900/950. Output interfaces including HD-SDI, SD-SDI, computer XGA, and i.LINK (HDV) are offered via optional boards (HFBK-HD1 and HFBK-SD1) that are installed in the two slots located on the unit's rear panel.



Optional Output Boards for the HFU-X310



HFBK-HD1 (SOHFBKHD1): HD Digital (two HD-SDI) and Analog (component Y/Pb/Pr or RGB) output board**CALL**

HFBK-SD1 (SOHFBKSD1): SD-SDI Digital and Analog (component Y/Pb/Pr or RGB, composite or Y/C) output board**CALL**

HFBK-XG1 (SOHFBKXG1): VGA, XGA and WXGA output board**CALL**

HFBK-TS1 (SOHFBKTS1): HDV/iLink output board. Also has analog inputs (L/R phono jack) for two channels of audio to be embedded into the HDV signal**CALL**

Accessories for the HDC-X300 • HDC-X310

RM-B750 Remote Control Unit

The RM-B750 offers a highly mobile and fully controllable camera system in the field by integrating control capability equivalent to a Master Set-up Unit into a compact unit powered from the device to be controlled. The RM-B750 can be connected directly to the HDC-X300 or HFU-X310. The combination of an LCD touch-panel screen and direct push buttons enables full parameter adjustment of the camera to be controlled. For further convenience, the RM-B750 has a Memory Stick slot so various setup parameters can be stored and transferred between cameras.

(Mfr # RMB750 • B&H # SORMB750) **4514.50**



RM-B150 Remote Control Unit



The RM-B150 enables control over iris, master ped, color correction and camera control directly with access to the main camera menu via additional buttons.

(Mfr # RMB150//A • B&H # SORMB150) **2,099.95**

RCP-750/RCP-751 Remote Control Panels

The RCP-750 and RCP-751 are remote control panels that can be used up to 650' away, making them useful in a variety of applications.

The RCP-750 and RCP-751 are identical in function except on the RCP-750 the iris and master black adjusters are joysticks, and on the RCP-751 they are rotator knobs.



RCP-750 Remote Control Panel

(Mfr # RCP750 • B&H # SORCP750) **5,899.50**

RCP-751 Remote Control Panel

(Mfr # RCP751 • B&H # SORCP751) **5,899.50**

MSU-900/MSU-950 Master Setup Units

The MSU-900 Master Setup Unit and MSU-950 Portable Master Setup Unit are a central control panel used for the adjustment of camera parameters in a multi-camera system.

- ◆ Central control of camera parameters for the entire camera system
- ◆ Picture and waveform monitor switching
- ◆ Precise picture adjustment
- ◆ Built-in 6.5" LCD display for clear viewing of adjustment parameters during operation
- ◆ Memory Stick slot for storing/recalling files
- ◆ Built-in Ethernet interface (100Base-TX)



MSU-900 Master Setup Unit

(Mfr # MSU900 • B&H # SOMSU900) **10,849.95**

MSU-950 Master Setup Unit

(Mfr # MSU950 • B&H # SOMSU950) **10,849.95**

Fujinon HSs18x5.5MD-D18 and HSs18x5.5BERD-D18 Zoom Lenses for Videoconferencing and ENG Applications

The HSs18x5.5MD-D18 and HSs18x5.5BERD-D18 lenses compliment the HDC-X300 or HDC-X310 for each application. With a focal length range of 5.5 to 100mm and a wide angle of view (64° at 5.5mm), the HSs18x5.5MD-D18 HD is one of the most powerful teleconferencing lenses on the market, providing crisp, clear pictures for corporate or broadcast applications. Designed to enhance the performance of the HDC-X300/310, it features an 18x zoom ratio, a maximum relative aperture of 1.8 at 100mm, and a M.O.D. of 0.6m from the front of the lens.

Like the HSs18x5.5MD-D18, the HSs18x5.5BERD-D18 HD lens boasts an 18x zoom ratio, a focal length range of 5.5 to 100m, and an angular field of view of 64° at 5.5mm. A full-servo, ENG-style lens, it's designed to support today's most demanding ENG applications. It features a maximum relative aperture of 1:1.8 at 100mm and an M.O.D. of 0.6m from the front of the lens. It comes complete with Fujinon's Inner Focus technology to minimize lens breathing and a servo module with zoom, focus and iris servo motors.

HSs18X5.5BMD-D18 (Mfr # HSS18X5.5BMD-D18 • B&H # FUHSS18X55BM): 18x Motor Drive Video Conferencing Lens **7999.95**

HSs18X5.5BERD-D18 (Mfr # HS18X5.5ERD-D • B&H # FUHS18X55ERD): 18x ENG Lens with Servo Zoom/Focus and 2x **18,499.95**

Fujinon Pan/Tilt Robotics Package

Perfect combination with the HSs18x5.5BMD lens, the HDC-XPTZ/F Fujinon remote-controlled robotics package provides control for zoom, iris, and pan/tilt functions. Ideal for remote POV shooting, sports, houses of worship, and auditorium / event halls, it supports up to 8.8 lbs and features whisper-quiet, ultra-smooth operation. Pan range is ±150° and tilt range is ±95°. The package includes one pan and tilt head, camera/lens supporter and a system controller.

(Mfr # HDCXPTZ/F • B&H # SOHDCXPTZF) **8,399.95**

Fujinon EOP-102J-60B Joystick Controller

The EOP-102J-60 can controls up to four HDCX300 or HDCX310 cameras provides a variable-speed joystick, rocker switch, and potentiometer as well as close, open, auto, and remote iris controls. It comes with a 32-shot per head memory and allows users to control camera on/off positions, shutter speed, gain adjust, color bar, and black and white levels. with 32 presets.

(Mfr # EOP102J60B • B&H # FUEOP102J60B) **3,739.95**



DXC-D55 • DXC-D55WS

14-bit Full-Digital Production Camera



From the very first model, Sony DXC Series standard definition (SD) production cameras have been widely accepted by a great number of video professionals around the world, due to their excellent picture performance, system versatility, and cost efficiency. The DXC-D55 and DXC-D55WS are the next-generation in the DXC-series of cameras, designed for even greater picture quality and operational ease of use. Both the DXC-D55 (4:3 aspect ratio) and the DXC-D55WS (16:9/4:3-switchable aspect ratio) feature the field-proven 2/3" Power HAD EX CCDs and 14-bit A/D conversion built into a highly sophisticated LSI. The result is superior picture quality, excellent sensitivity and signal-to-noise ratio, plus low noise and reduced smear level compared

to that of the previous models (DXC-D50, DXC-D50WS). In addition to superb picture quality, these cameras offer extremely precise and flexible image controls such as highlight control, contrast control, and detail control, thanks to the sophisticated DSP LSI with more than 30-bit accuracy. A variety of automatic functions are also included, allowing easy and convenient operation in any shooting scenario. For added convenience, all DXC-D50 accessories are backwards compatible with the DXC-D55 series. Allowing for excellent system versatility, two types of camera-control units are available. For studio multicore use, the CCU-D50 is the perfect choice, and the CCU-TX50 is the choice for studio and triax applications. The RCP-D50/D51 Remote Controllers can also be used with either system.

FEATURES

Three 2/3" Power HAD EX CCDs

The DXC-D55/D55WS are equipped with three 2/3" Power HAD EX CCDs, providing 920 lines of horizontal resolution. These high performance CCDs also provide excellent sensitivity of F11 at 2000 lux, a remarkable S/N ratio of 65 dB and an extremely low smear level of -145 dB.

14-bit A/D Conversion

They incorporate a high-quality 14-bit A/D conversion circuit that allows images captured by the Power HAD EX CCDs to be processed with four times the precision than 12-bit A/D converters. In particular, this higher resolution reproduces the contrast more faithfully in mid-to-dark-tone areas of the picture. In addition, the 14-bit accuracy helps to eliminate pre-knee signal compression at highlight areas, and allows the camera to clearly reproduce a high-luminance subject.

Advanced Digital Signal Processing (ADSP)

A key indicator of quality in a DSP camera is how many bits are used in its nonlinear processes, such as gamma correction. The DXC-D55/D55WS Series uses more than 30 bits, thus minimizing rounding errors and maintaining the high-quality images captured by the Power HAD EX CCDs. This advanced digital signal processing (ADSP) also enables highly sophisticated image controls, such as knee saturation, adaptive highlight control, and skin-tone detail controls.

Knee Saturation Control

In general, shooting very bright portions of an object such as key light reflections from a person's forehead can reduce color saturation and change the hue in highlight areas. The knee saturation control function incorporated in the DXC-D55/D55WS Series effectively reduces this 'washed-out' effect on saturation and hue changes, and reproduces far more natural color in highlight areas.

Low Key Saturation

With conventional cameras, low-light areas can be subject to reduced saturation, resulting in the color in these areas being 'washed-out'. The low key saturation function incorporated in the DXC-D55/D55WS Series helps eliminate this problem by optimizing the amplification of color saturation at low light levels, providing more natural color reproduction.

Skin-tone Detail Control

They have a skin-tone detail control function that allows softening of the skin-tone detail in the facial area, while maintaining the sharpness of other parts of the picture. The skin-tone detail area can be selected simply and quickly, using an area detect cursor in the viewfinder screen. The color range for skin-tone detail and the skin detail level can also be selected manually, using the viewfinder menu system.

DXC-D55 • DXC-D55WS

Adaptive Highlight Control

They offer outstanding overexposure control by applying multiple knee-points/slopes to handle highlight areas in a dynamic manner. By analyzing the highlight areas of a scene, the camera automatically sets and optimizes multiple knee points/slopes accordingly. This enables the reproduction of extremely difficult scenes (for example, an interior scene with a bright illuminant such as sunlight in the background) with wide exposure latitude. The adaptive highlight control applies only to input video levels in excess of the knee point; the middle and low-luminance parts of the video signal are unaffected by this control.

Built-in Optical ND Filter and Electronic CC Function

The DXC-D55/D55WS provide optimum light and color temperature control by using a built-in optical ND (Neutral Density) filter wheel and electronic CC (Color Correction) function. The use of electronic color correction allows all filters in the filter wheel to be of the ND type, providing the operator with great flexibility in depth-of-field and exposure control. Electronic color correction can also be controlled using a remote controller, for even easier operation.

Factory-preset Matrix

They are equipped with several types of factory-preset matrix files which allow you to instantly set up camera parameters that match common lighting situations, such as Standard, High Saturation, Fluorescent, etc.

Memory Stick Storage of Camera Setup Parameters

Capable of saving and recalling setup parameters such as scene files, reference files, and lens files via Memory Stick, the DXC-D55/D55WS allow you to effectively manage camera parameters for individual scenes, plus individual users camera-setup preferences, such as viewfinder indicator settings. Setup parameter files stored on a Memory Stick can be transferred to another DXC-D55/D55WS camera or a RCP-D50/D51 Remote Control Unit, allowing quick, easy setup in multiple camera systems. Setup files can also be loaded to a PC, enabling them to be e-mailed as attachments and shared with other cameras.

DXC-D55 Camera Head and Systems

DXC-D55H 2/3" 4:3 Dockable Camera Head (Mfr # DXCD55H • B&H # SODXCD55H).....**CALL**

DXC-D55L 2/3" Camera Head: With viewfinder, shotgun microphone, and tripod plate. (Mfr # DXCD55L • B&H # SODXCD55L)**CALL**

DXC-D55SDPAC1 4:3 Studio Multicore CCU Package: Includes DXC-D55H camera head, CAD-50 camera adapter, CCU-D50 camera control unit, 5" studio viewfinder and VCT-U14 tripod adapter. (Mfr # DXCD55SDPAC1 • B&H # SODXCD55SDP1)**13,999.95**

DXC-D55SDPAC2 4:3 Studio Multicore CCU Package: Includes DXC-D55L camera head with viewfinder, shotgun microphone, and tripod plate; CAD-50 camera adapter, CCU-D50 camera control unit, 5" studio viewfinder and VCT-U14 tripod adapter. (Mfr # DXCD55SDPAC1 • B&H # SODXCD55SDP1)**14,999.95**

DXC-D55SDPAC3 Studio Multicore Package: Includes DXC-D55H camera head, CAD-50 camera adapter, CCU-D50 camera control unit, 5" studio viewfinder, RCP-51 remote control and VCT-U14 Tripod Adapter. (Mfr # DXCD55SDPAC3 • B&H # SODXCD55SDP3)**16,599.95**

DXC-D55SDPAC4 Studio Multicore Package: Includes DXC-D55H camera head, CAD-50 camera adapter, CCU-D50 camera control unit, 5" studio viewfinder, RCP-D50 remote control and VCT-U14 tripod adapter. (Mfr # DXCD55SDPAC4 • B&H # SODXCD55SDP4)**16,899.95**

DXC-D55SDPAC5 4:3 Multicore Studio/ENG Package: Includes DXC-D55L camera head, CAD-50 camera adapter, CCU-D50 camera control unit, 5" studio viewfinder and RCP-D50 remote control. (Mfr # DXCD55SDPAC5 • B&H # SODXCD55SDP5)**17,999.95**

DXC-D55SDPAC6 4:3 Multicore Studio/ENG Package: Includes DXC-D55L 2/3" camera head, CAD-50 camera adapter, CCU-D50 camera control unit, 5" studio viewfinder and RCP-51 remote control. (Mfr # DXCD55SDPAC6 • B&H # SODXCD55SDP6)**18,299.95**

DXC-D55TXPAC1 4:3 Triax Package with SDI Output: Includes DXC-D55H camera head, CA-TX50 Triax camera adapter, CCU-TX50 camera control unit, 5" studio viewfinder, RCP-D50 remote control and VCT-U14 tripod adapter. (Mfr # DXCD55TXPAC1 • B&H # SODXCD55TXP1)**28,499.95**

DXC-D55WS Camera Head and Systems

DXC-D55WSH 2/3" Dockable Camera Head (Mfr # DXCD55WSH • B&H # SODXCD55WSH)**CALL**

DXC-D55WSHPAC3 Studio Multicore Package: Includes DXC-D55WSH camera head, CAD-50 camera adapter, CCU-D50 camera control unit, 5" studio viewfinder and VCT-U14 tripod adapter. (Mfr # DXCD55WSHPAC3 • B&H # SODXCD55WSH3)**16,499.95**

DXC-D55WSHPAC4 Studio Multicore Package: Includes DXC-D55WSH camera head, CAD-50 camera adapter, CCU-D50 camera control unit, 5" studio viewfinder, RCP-51 remote control and VCT-U14 tripod adapter. (Mfr # DXCD55WSHPAC4 • B&H # SODXCD55WSH4)**18,999.95**

DXC-D55WSHPAC5 Studio Multicore Package: Includes DXC-D55WSH camera head, CAD-50 camera adapter, CCU-D50 camera control unit, 5" studio viewfinder, RCP-50 Remote Control and VCT-U14 tripod adapter. (Mfr # DXCD55WSHPAC5 • B&H # SODXCD55WSH5)**19,399.95**

DXC-D55WSHPAC2 16:9/4:3 Triax Package with SDI Output: Includes DXC-D55WSH camera head, CA-TX50 Triax camera adapter, CCU-TX50 camera control unit, 5" studio viewfinder, RCP-51 remote control and VCT-U14 tripod adapter. (Mfr # DXCD55WSHPAC2 • B&H # SODXCD55WSH2) ...**29,999.95**

DXC-D55WSHPAC1 16:9/4:3 Triax Package with SDI Output: Includes DXC-D55WSH head, CA-TX50 Triax camera adapter, CCU-TX50 camera control unit, 5" studio viewfinder, RCP-D50 remote control and VCT-U14 tripod adapter. (Mfr # DXCD55WSHPAC1 • B&H # SODXCD55WSH1)**30,999.95**

DXC-D55 • DXC-D55WS

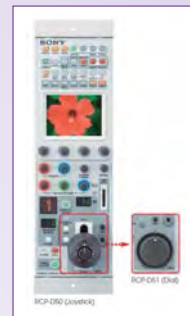
Enhanced Ease of Operation

- ◆ The DXC-D55/D55WS provide several convenient functions enabling operators to start shooting with minimum setup procedures, and in less time.
- EZ Focus function allows accurate focus adjustments without manually opening the lens iris. Push the EZ Focus button, and the iris automatically opens to reduce the depth of field and make focusing much easier. At the same time, the shutter is automatically set to obtain the correct exposure.
- Settings for key camera parameters are instantly set to the standard or auto position simply by pressing the EZ Mode button – making the camera instantly ready for shooting. This feature is very convenient when operators require fast camera setup.
- Auto Tracing White Balance (ATW) function, automatically adjusts white balance as lighting conditions change. This function is very useful when shooting in rapidly changing lighting conditions, such as when moving from indoor to outdoor locations.
- ◆ The DXC-55/D55WS's switch panel is backlit, allowing operators to see switch positions in dark environments.
- ◆ The position of the DXC-55/D55WS's shoulder pad can be adjusted – either forwards or backwards – to provide the operator with a comfortable, well-balanced camera when docked with a camera adapter.
- ◆ They are equipped with the DXF-801 1.5" 4:3 B&W viewfinder as standard. The DXF-20W 2" 16:9 B&W viewfinder is also available as an option. For studio operations, the wider DXF-51 5" monochrome viewfinder can be mounted on the camera adapter.
- ◆ Programmable gain (-3/0/3/6/9/12/18/24/30/36 dB)
- ◆ Variable-speed electronic shutter
- ◆ Clear Scan (CLS) function: 60.1 (NTSC)/50.2 (PAL) Hz to 6000 Hz
- ◆ Monitor output
- ◆ Built-in 1 kHz audio reference
- ◆ Date-and-time superimposition on the video signal and viewfinder
- ◆ Enhanced Vertical-Definition System (EVS)
- ◆ Auto iris mode (spot, backlight)
- ◆ Mic low cut
- ◆ Dual zebra

OPTIONAL ACCESSORIES

RCP-D50 / RCP-D51 Remote Controllers

Both the RCP-D50 joystick-type controller, and RCP-D51 dial-type controller are equipped with a 3.5" color touch panel LCD screen and offer extensive control of the DXC-D55/D55WS through easy-to-use menu-based operations. The LCD also allows the incoming camera image to be monitored – a feature that comes in handy when identifying which RCP is controlling which camera in multi-camera systems. Another convenient feature is the Memory Stick system, which allows various scene files to be stored on and recalled from the Memory Stick media, and loaded to either a different RCP-D50/D51 controller, or to a DXC-D55/D55WS camera.



RCP-D50 Remote Controller

(Mfr # RCPD50 • B&H # SORCPD50) **2,899.95**

RCP-D51 Remote Controller

(Mfr # RCPD51 • B&H # SORCPD51) **2,599.95**

CA-D50 SDI Camera Adapter for the DXC-D55/55WS Head (Mfr # CAD50 • B&H # SOCAD50)

With this camera adapter attached, the DXC-D55/D55WS can be remotely controlled from the CCU-D50 multicore camera control unit using 26-pin cables. The video and audio output of the CA-D50 are transferred to the CCU-D50 as a component digital-SDI signal up to 150 meters with CCZ-AD cable. This combination allows the establishment of a full digital acquisition system. The CA-D50 with the CCU-D50 supports all the major intercom systems including Clearcom, RTS, and 2- and 4-wire systems **1519.95**

CCU-D50 (Mfr # CCUD50 • B&H # SOCCUD50)

Digital CCU for DXC-D50L/D50WSL Systems **2,449.95**

CA-TX50 (Mfr # CATX50 • B&H # SOCATX50)

Triax System Camera Back for DXC-D50L and D50WSL Camera Head **4,634.95**

CCU-TX50 (Mfr # CCUTX50 • B&H # SOCCUTX50)

Triax System Base Station with Control Panel **10,999.95**

DXF-20W: 2" 16:9 Monochrome Viewfinder (Mfr # DXF20W • B&H # SODXF20W) **2399.95**

DXF-51: 5" 4:3 Monochrome Viewfinder (Mfr # DXF51 • B&H # SODXF51) **CALL**

VCT-U14: Quick Release Tripod Adapter Plate (Mfr # VCTU14 • B&H # SOVCTU14) **189.95**

AC-DN10: AC adapter/Charger with 4-Pin XLR (Mfr # ACDN10 • B&H # SOACDN10) **609.95**

ECM-673: Short Electret Condenser Microphone (Mfr # ECM673 • B&H # SOECM673) **CALL**

ECM-674: Electret Condenser Microphone (Mfr # ECM674 • B&H # SOECM674) **345.00**

CAC-12: Camera Microphone Holder (Mfr # CAC12 • B&H # SOCAC12) **176.95**

CCA-7-150: 165' 10-pin to 10-pin connecting cable (Mfr # CCA7/50US • B&H # SOCCA750US) **CALL**

CCA-7-100: 333' 10-pin to 10-pin connecting cable (Mfr # CCA7/100US • B&H # SOCCA7100) **CALL**

CCZ-AD2: 6' multi-core connecting cable (Mfr # CCZAD2 • B&H # SOCCZAD2) **359.95**

CCZ-AD5: 15' multi-core connecting cable (Mfr # CCZAD5 • B&H # SOCCZAD5) **379.95**

CCZ-AD10: 30' multi-core connecting cable (Mfr # CCZAD10 • B&H # SOCCZAD10) **439.95**

CCZ-AD5: 82' multi-core connecting cable (Mfr # CCZAD25 • B&H # SOCCZAD25) **734.95**

CCZ-AD50: 165' multi-core connecting cable (Mfr # CCZAD50 • B&H # SOCCZAD50) **1054.95**

CCZ-AD100: 330' multi-core connecting cable (Mfr # CCZAD100 • B&H # SOCCZAD100) **1589.95**

CCZ-AD150: 450' multi-core connecting cable (Mfr # CCZAD150 • B&H # SOCCZAD150) **2199.95**

CCU-D50 • CCU-TX50

The high picture quality and operability of DXC-D55/D55WS cameras is supported by a range of peripherals that make camera system installation very smooth, both in the studio and out in the field. The DXC-D55/D55WS can be configured in two main operating styles: Multi-core CCU and Triax CCU operation. Easy-to-use remote control panels are also available for added operational convenience.

CCU-D50 and CA-D50

Multi-core CCU Operation— for End-to-End Digital Systems

With the CA-D50 Camera adapter attached, the DXC-D55/D55WS can be remotely controlled from the CCU-D50 Multi-core Camera Control Unit using a CCZ-A cable (26-pin). The video and audio output of the CA-D50 Camera adapter are transferred to the CCU-D50 Camera Control Unit as an SDI signal through a CCZ-A cable up to 75m (246') long. This combination allows for the establishment of a full digital-acquisition system.



- ◆ Switchable digital/analog signal transmission.
- ◆ Wide variety of control functions.
- ◆ Up to 75m (246') SDI transmission via a CCZ-A cable (26-pin).
- ◆ Up to 200m (656') SDI transmission using a separate low-loss coaxial video cable in addition to a CCZ cable.
- ◆ Analog transmission for longer control distances of up to 300m. (984') via a CCZ-A cable.
- ◆ Analog composite output and one of the following outputs: SDI, Y/R-Y/B-Y, RGB, y/C.
- ◆ Compatibility with RCP-D50 and RCP-D51 Remote Control Panels.
- ◆ Support for major intercom systems (two-wire/four-wire/RTS/Clearcom)
- ◆ Teleprompter support
- ◆ Red/Green tally indication
- ◆ Fan alarm LED



CCU-TX50 and CA-TX50

Triax CCU Operation – for Wide-bandwidth Transmission

With the CA-TX50 Triax Camera adapter attached, the DXC-D55/D55WS can be remotely controlled from the CCU-TX50 Camera Control Unit using a triax cable, the use of which enables sophisticated remote control over extended operating distances. A wide-bandwidth transmission system is employed, enabling the high resolution images of DXC-D55/D55WS cameras to be transmitted with virtually no drop in resolution.

The CCU-TX50/TX50P supports the following features:

- ◆ Wide-bandwidth transmission (10 MHz for Y and 4.5 MHz for R-Y/B-Y)
- ◆ High-quality analog component video transmission
- ◆ Long-distance transmission (eg. 1500 m via a ø14.5 mm cable)
- ◆ Compact – half rack width and 3U height
- ◆ Wide range of advanced control functions
- ◆ Compatible with the RCP-D50 and RCP-D51 Remote Control Panels
- ◆ Three SDI or three composite outputs
- ◆ One component output (Y/R-Y/B-Y or R/G/B selectable)
- ◆ Three inputs for return video (BNC type)
- ◆ Teleprompter support
- ◆ Red/Green tally indication
- ◆ Support for major intercom systems (four-wire/RTS/Clearcom)
- ◆ Program audio input
- ◆ Two-channel microphone system (two XLR connectors)

EVI-D70

Pan/Tilt/Zoom (PTZ) Remote Camera

The EVI-D70P is a robotic pan/tilt/zoom color video camera that combines a high quality 1/4 type EXview HAD CCD color camera with the flexibility of a remote pan/tilt/zoom operation, all in a compact easy-to-use package. Ideal for video conferencing, it features a wide pan/tilt range with an 18x optical zoom lens and a fast pan/tilt mechanism. It is also equipped with a variety of convenient features such as an Auto ICR function, Alarm function and RS-232c/422 serial control, making it ideal for any remote-shooting applications such as distance learning, places of worship, courtrooms, hospitals and nursing homes, event venues, concert halls, and just about any other remote shooting application.



FEATURES

- ◆ The adoption of Sony EXview HAD CCD technology improves basic camera performance. For example, these cameras offer superb sensitivity of 1 lx (typical), and a low smear level and D-range.
- ◆ The camera offers a wide pan angle of 170° from center, and pan speed of up to 100° per second. The unit will tilt upward a full 90° and downward 30°. Tilt speed is a maximum of 90° per second.
- ◆ The EVI-D70 offers a high quality 18x zoom lens that at its widest, offers 48° of horizontal view and at full zoom 2.7°. The camera has a digital zoom that adds 12x power to the optical lens zoom.
- ◆ Store up to 6 predetermined positions of the pan/tilt/zoom for instant recall. The presets also include picture parameters like white balance and exposure features.
- ◆ The camera has an infrared-cut filter that makes it effective in both day and night conditions. The Auto ICR (IR Cut filter Removal) function automatically switches the settings to attach or remove the IR Cut filter for increased sensitivity.
- With a set level of darkness, the IR Cut filter is automatically disabled (ICR ON), and the infrared sensitivity is increased.
- With a set level of brightness, the filter is automatically enabled (ICR OFF). The ICR automatically engages depending on the ambient light, allowing the camera to be effective both in day and night environments.
- ◆ An alarm function can detect changes within a user-designated area of an image. (Using any of the pan/tilt/zoom functions disables the alarm.) When a change in AF, AE or both is detected, the camera outputs an alarm trigger signal to the external equipment via the VISCA protocol. In combination with the Spot AE function, the camera also detects changes in the luminance level, and outputs an alarm signal. The detecting area can be applied to any of 16 vertical and 16 horizontal blocks.
- ◆ All camera settings and pan/tilt/zoom functions can be controlled remotely via a PC. Via the RS-232c connection, maximum cable length can be extended to 50'. Using the RS-422 connection extends this to 4000'.
- ◆ Ceiling mount or desktop installation
- ◆ Auto Power-Off/Night Power-Off function
- ◆ Daisy chain capability (up to 7 cameras)
- ◆ 37mm mount for optional wide conversion lenses

Specifications

Minimum illumination: 1 lx (F1.4)

Auto Exposure: Auto/Manual/Priority AE, Exposure and Back-light compensation

Shutter Speed: 1 to 1/10,000 s

Gain: Auto/Manual (-3 to +28 dB, 2 dB steps)

White Balance: Auto/ATW/Indoor/Outdoor/One push/Manual

S/N Ratio: More than 50 dB

Pan: ±170° (Max. speed: 100°/s),

Tilt: -30° to +90° (Max. speed: 90°/s)

Position Preset: 6 positions

Picture Effects: Neg. Art, Black & White

Video Output: VBS, S-Video

Power Requirements: DC 10.8 to 13.2v

EVI-D70 Pan/Tilt/Zoom Remote Camera

(Mfr # EVID70 • B&H # SOEVID70)**929.95**

Outdoor Dome Housing: For the EVI-D70.

Clear (Mfr # EVIFDP8C3 • B&H # SOEVIDP8C3) or tinted (Mfr # EVIOD8T3 • B&H # SOEVID8T3) dome**429.95**

Indoor Pendant Mount: For the EVI-D70.

Clear (Mfr # EVIID8C1 • B&H # SOEVIID8C1) or tinted (Mfr # EVIID8T1 • B&H # SOEVIID8T1) dome**209.95**

Indoor Vandal Resistant, Pendant Mount

(SOEVID7): With tinted dome housing**321.95**

Outdoor Vandal-Resistant Pendant Mount

(SOEVIDP7C3) With clear dome housing**509.95**

Corner Mount Adapter Bracket (SOSNCACA2)

Requires use of Gooseneck wall mount**59.95**

Pole Mount Adapter Bracket (SOSNCAPM3)

Requires use of Gooseneck wall mount**34.95**

EVI-D100

Pan/Tilt/Zoom (PTZ) Remote Camera

The EVI-D100 camera is ideal for applications such as videoconferencing, distance learning, surveillance, conference and training rooms, courtrooms, houses of worship, internet communications and just about any application that requires a high-quality color video camera with the flexibility of remote pan/tilt/zoom operations. The EVI-D100 is a high quality CCD cameras that combine a high-speed, quiet pan/tilt with a wide angle view and 40x zoom (10x optical + 4x digital), all in a compact, easy-to-use package. The EVI-D100 camera boasts impressive and innovative features such as autofocus, auto white balance and automatic exposure control which provide fast and stable hands free operation when the camera changes pan/tilt positions.

Additional advantages are provided by easy to use presets, daisy-chaining capability and various digital picture effects.



FEATURES

- ◆ The camera moves to a designated position quickly with a high pan/tilt speed:
 - Max. pan speed: 300°/s (range ±100°)
 - Max. tilt speed: 125°/s (range ± 25°)
- ◆ Direct drive motors account for the gear-less structure of the camera, reducing the noise of pan/tilt motion drastically compared to conventional models.
- ◆ The camera has a high quality 10x zoom lens that at its widest offers 65° of horizontal view. For even greater close-up images, there is also a 4x digital zoom.
- ◆ Built-in conversion lens provides a wide angle view of 65°, making it ideal for use in small-sized rooms.
- ◆ With Auto Sleep Function the camera can be set to automatically turn off when not in use after a specified period of time.
- ◆ Supplied easy-to-use Multi-function IR Remote Commander unit is useful for basic pan/tilt/zoom camera control.
- ◆ RS-232c serial control allows all camera settings and pan/tilt/zoom functions to be controlled remotely via PC.
- ◆ Store up to 6 pre-determined positions of the pan/tilt/zoom/focus for instant recall. Presets also include picture parameters like white balance and exposure features. A battery backup insures the presets remain in memory even when the camera is powered down.

- ◆ The EVI-D100 can render special effect images for a variety of production requirements. Effects include:
 - Mirror Image, Still Image on Field Memory, Pastel Image, Negative/Positive Reversal, Sepia Image, Monochrome Image, Enhanced Contrast, Mosaic Image, Vertical Stretch, Horizontal Stretch, Motion Image on Still Image, Continuous Still Image, Motion Images on Binaried Still Image, After-image Lag of Moving Object.

Specifications

Image Sensor: 1/4 type Super HAD CCD
Horizontal Resolution: 470 TV lines (Wide end)
Lens: 10x optical zoom, 4x digital zoom, f = 3.1 to 31, F1.8 to 2.9
Horizontal Angle of View: 6.6 to 65°
Minimum Object Distance: 100mm (Wide end), 600mm (Tele end)
Minimum Illumination: 3.5 lx (F1.8)

Auto Exposure: Auto/Manual/Priority AE, Exposure and Back-light compensation

Shutter Speed: 1/4 to 1/10,000

White Balance: Auto, ATW, Manual, One Push, 3200K, 5800K

S/N Ratio: Over 50 dB

Video Output: VBS, S-Video

Power Requirements: DC 10.8 to 13.0v

CPITVD100

Optional Telemetrics Desktop Control Panel

Combined with the EVI-D100 camera, the Telemetrics' controller is ideal for applications such as videoconferencing, distance learning, surveillance, conference and training rooms, courtrooms, houses of worship, internet communications and just about any application that requires a high-quality color video camera with the flexibility of remote pan/tilt/zoom operations.



- ◆ Proportional Joystick for control of pan/tilt functions
- ◆ Six preset shot switches
- ◆ Local/Remote select
- ◆ Control up to four camera systems
- ◆ Four Pan/Tilt camera select switches

EVI-HD1

High Definition Pan/Tilt/Zoom Camera

The EVI-HD1 is high-definition EVI robotic camera designed for videoconferencing, distance learning, houses of worship and corporate training. The single chip-based, pan/tilt/zoom camera features multi-format capabilities to output both SD (standard-definition) and HD (high-definition) video, so users can decide how and when they wish to migrate to high-definition. The EVI-HD1 uses a 1080i CMOS sensor that delivers exceptional high-definition resolution in 720p, 1080i or 1080p. The camera can be used with compatible codec's and systems from other manufacturers, due to its ability to output standard-definition video (composite and S-Video), high-definition analog component (Y, Pb, Pr) or digital HD-SDI.

The EVI-HD1 incorporates a 10x optical zoom lens with a 70° horizontal field of view, making it ideal for conference rooms and courtrooms. It outputs 16:9 images in 480i or HD formats. The EVI-HD1 is also equipped with high-torque, high-speed direct drive motors that enable smooth, fast and quiet pan/tilt operations. The camera's pan/tilt/zoom controls can be easily operated by the supplied IR Remote Commander unit or via the RS-232C interface (VISCA protocol) with a host of commercially available controllers.



FEATURES

- ◆ Incorporates a 1/3" HD CMOS sensor (2,000,00 pixels) providing outstanding picture quality and high resolution images.
- ◆ By adopting a newly developed direct drive motor mechanism, the EVI-HD1 is extremely quiet, moves smoothly and quickly to designated positions and can cover a wide shooting range.
 - Max. pan speed: 300° (range ± 100°)
 - Max. tilt speed: 125° (range ± 25°)
- ◆ With multi-format video outputs from NTSC/PAL to full HD, the EVI-HD1 enables end-users to shoot an image using the full high definition 1080i video format and output in one of 14 formats including eight HD types and six video formats.
- ◆ Fast and stable 10x optical auto-focus zoom lens can be used with the 4x digital zoom, offering an impressive 40x zoom ratio.
- ◆ The EVI-HD1 incorporates a newly developed wide-angle lens for wide (70°) field-of-view image capture, a plus for small to medium-sized conference rooms.
- ◆ The EVI-HD1 can store up to six preset values for pan/tilt/zoom, focus position, exposure mode, and white balance mode and can even retain these settings when the camera is shut off.
- ◆ All camera settings and pan/tilt/zoom control functions can be performed remotely at high communication speeds via the RS-232C interface (VISCA protocol).
- ◆ The EVI-HD1 is equipped with an HD-SDI interface terminal that allows for long-distance transmission of high-quality HD images without degrading picture quality.

Specifications

Image sensor: 1/3-type CMOS

Effective pixels: Approx. 2 Megapixels (16:9)

Signal system: HD 1080/59.94i, 1080/50i, 1080/29.97p, 1080/25p, 720/59.94p, 720/50p, 720/29.97p, 720/25p

Lens: 10x optical zoom, 40x with digital zoom, f = 3.4 to 33.9mm, F 1.8 to F 2.1

Minimum object distance: 100mm (wide)

Horizontal viewing angle: 8° (tele) to 70° (wide) at HD signal output

Focus system: Auto / Manual

Minimum illumination: 15 lx (50 IRE, F1.8)

Exposure control: Auto / Manual / Priority AE / Exposure compensation / Bright

Shutter speed: 1/2 to 1/10,000 sec.

Gain: Auto / Manual (-3 to +18 dB)

White balance: Auto / Indoor / Outdoor / One push auto / Manual

S/N Ratio: 50 dB

Pan/Tilt: Pan ±100° (Max. speed 300°/sec.); Tilt ±25° (Max. speed 125°/sec.)

Position preset: 6 positions

Video output: HD HD-SDI, Analog Component (Y/Pb/Pr) SD VBS, Y/C

Power requirements: 12v DC (10.8 to 13v DC)

Dimensions: 10¼" x 6" x 6¾" (WHD)

Weight: 4 lb. 7 oz.

EVI-HD1 HD Color P/T/Z Camera: Includes connector panel and easy-to-use multi-function IR Remote Commander— for basic settings and pan/tilt/zoom camera control.

(Mfr# EVIHD1 • B&H# SOEVIHD1)**3699.00**

BRC SERIES

Pan/Tilt/Zoom Robotic Cameras

The BRC Series consists of three revolutionary Pan/Tilt/Zoom (PTZ) color video cameras, each especially designed for remote video shooting applications. The BRC-300 (SD) and BRC-H700 (HD) are equipped with three 1/4" and 1/3" CCDs respectively, while the BRC-Z700 is equipped with three 1/4" HD ClearVid CMOS sensors. This camera is both HD and SD capable, enabling versatile operations and allowing users to easily migrate from SD to HD picture quality. What's more, the BRC-Z700 incorporates a newly designed smooth PTZ mechanism for precise camera control.

The BRC cameras have very wide pan and tilt ranges, as well as extremely fast and accurate pan/tilt movements, making them suitable for capturing not only fast-moving objects, but also slow-moving objects without rocking vibration. Moreover, users can operate the cameras intuitively with the optional RM-BR300 Remote Control Unit, which is equipped with an ergonomically designed joystick and feature-rich control panel. With the RM-BR300, users can control up to seven cameras, the presets for each camera, and other parameters as required. In addition, the BRC Series can be controlled over long distances via a single fiber optic cable connection. With a number of useful features and excellent picture quality, the BRC Series is ideal for a variety of remote video shooting applications, such as in houses of worship, auditoriums, teaching hospitals, corporate boardrooms, and at sporting events, trade shows, and concerts. Furthermore, they are an excellent choice for broadcast applications, such as the recording of television programs or as a weather camera.



FEATURES

BRC-300

3-CCD Standard Definition (SD) Video Camera

The standard-definition BRC-300 incorporates three 1/4.7" Advanced HAD CCD sensors with a total of 1,070,000 pixels. It delivers outstanding picture quality with high resolution and accurate color reproduction. Sony Advanced HAD technology enables this camera to produce high-quality SD images with low noise. It is ideal for cost effective SD applications – and it can capture images in both 4:3 and 16:9 aspect ratios, the latter offering a wider viewing angle. Furthermore, the BRC-300 is the smallest camera in the BRC Series, making it ideal in environments that require the camera to be positioned unobtrusively.

BRC-H700

3-CCD High Definition (HD) Video Camera)

The BRC-H700 offers high picture quality and high sensitivity with three 1/3" HD CCDs and a resolution of 1,120,000 total pixels. Ideal for high resolution image-capturing applications, it satisfies the demands of users who require exceptional-quality video images with accurate color reproduction. In addition, the highly sensitive CCDs enable remote video shooting in environments where the lighting is less than ideal. Furthermore, it has the widest viewing angle in the BRC Series, allowing users to capture wide areas of a scene such as audiences at concerts or in auditoriums.

BRC-Z700

3-CMOS SD/HD Video Camera

The BRC-Z700 incorporates three 1/4" HD ClearVid CMOS sensors achieving a resolution of 1,120,000 pixels. It also incorporates a newly developed DSP to make effective use of the ClearVid CMOS sensors. The combination of the DSP and the sensors allows the camera to achieve both higher resolution and higher sensitivity compared to cameras equipped with conventional CMOS sensors.



Conventional CCD Sensor
(vertical smear)



ClearVid CMOS Sensor
(vertical smear minimized)

Furthermore, the camera's "color masking" function allows users to adjust specific colors in the image more precisely, while the "color detail" function allows users to smooth over skin tones. The BRC-Z700 features a 20x optical autofocus zoom lens with an optical image stabilizer, allowing users to clearly capture small or distant objects. It also offers dual HD/SD outputs and an enhanced Pan/Tilt mechanism that operates with extremely smooth and precise movements.

BRC SERIES

Video Outputs

- ◆ The BRC series offers the following outputs as standard –
- The BRC-300 features composite and S-Video output, the BRC-H700 offers HD Component (Y/Pb/Pr) and RGB output.
- The BRC-Z700 features HD component (Y/Pb/Pr) and RGB, as well as standard definition composite and S-Video output. What's more, each camera in the BRC Series has a wide range of optional interface cards to choose from. This versatility allows for flexible analog and digital system configurations.

RS-232C/RS-422

Remote Control (VISCA protocol)

- ◆ System integrators can easily configure complex systems because each camera is equipped with RS-232C/RS-422 interfaces supporting the VISCA protocol, which allows them to be controlled by external PCv and/or controllers.
- ◆ All local controls such as camera settings, pan/tilt/zoom and presets can be easily accessed, and up to seven cameras can be daisy-chained.

Multiple Position Presets and User-friendly Interface

- ◆ The BRC-H700 and BRC-Z700 each have 16 presets and the BRC-300 has six presets to which predefined pan/tilt/zoom positions and other parameters can be allocated. These presets can be recalled at the touch of a button to easily capture video from pre-specified areas.
- ◆ They can also be controlled from either the supplied IR Remote Commander Unit or optional RM-BR300 Remote Control Unit. The ergonomically designed joystick and feature-rich control panel of the RM-BR300 provide superb operability in various remote video shooting applications.

Flexible Installation

- ◆ Each has an "Image Flip" function, allowing them to be either mounted on a ceiling using the supplied ceiling mount kit or placed on a flat surface to meet the user's installation and space requirements.

High Performance Pan/Tilt/Zoom Mechanism



The cameras cover a wide shooting range with their highly accurate Pan/Tilt mechanism. All cameras have a very wide pan range of 340° and a tilt range of 120°. Both pan and tilt speeds are variable within the range of 0.25 to 60 degrees per second (BRC-H700 and BRC-300) and 0.22 to 60 degrees per second (BRC-Z700).

What's more, the BRC-Z700 has an extremely quiet motor that is capable of very precise movements. Each camera is also capable of capturing not only fast-moving objects, but also slow-moving objects without rocking vibration. For capturing small or distant objects, the BRC-Z700 incorporates a 20x optical auto-focus zoom lens and the BRC-H700 and BRC-300 adopt a 12x optical zoom lens.

Optional RM-BR300 Remote Control Unit

The RM-BR300 has an easy-to-use, ergonomic design that uses Sony's VISCA protocol to enable all local control, including pan/tilt/zoom settings and up to six highly accurate programmed camera and lens positions presets. A joystick controller gives precision camera moves and focus adjustments, while the feature-rich control panel provide superb operability in various remote-shooting applications. Control operations include adjustments for auto-focus, white balance, auto-exposure and backlight compensation. Using the VISCA protocol, up to seven cameras can be daisy-chained and remotely controlled from the RM-BR300.

(Mfr # RMBR300 • B&H # SORMBR300)CALL



Optional Optical Multiplex Units

Users can transmit and convert uncompressed digital raw data including external sync and camera control signals via an optical multiplex unit such as the BRU-H700 (HD) and BRU-300 (SD)— equipped with the optional multiplex interface card—into virtually any video output

format. With only a single cable connection between the camera and the optical multiplex unit, the system is extremely easy to install. The maximum cable length between these units are 1500' for the BRC-300 and 3200' for both the BRC-H700 and BRC-Z700.

BRU-300 Optical Multiplex Unit: Designed for the BRC-300, has two interface card slots allowing you to customize the unit (Mfr# BRU300 • B&H# SOBRU300)CALL

BRU-H700 Optical Multiplex Unit: Designed for the BRC-H700 and BRC-Z700, has two interface card slots allowing you to customize the unit (Mfr# BRUH700 • B&H# SOBRUH700)CALL

Optional Video Cards for use with Optical Multiplex Units

P/T/Z Color Video Cameras	BRC-H700	BRC-Z700	BRC-300
Optical Multiplex Cards	BRBK-H700	BRBK-MF1	BRBK-303
Optical Fiber Cables	CCFC-M100HG	CCFC-M100HG	CCFC-M100
Optical Multiplex Unit	BRU-H700	BRU-H700	BRU-300
Interface Cards	HFBK-HD1, HFBK-SD1 HFBK-XG1, HFBK-TS1	HFBK-HD1, HFBK-SD1 XG1, HFBK-TS1	BRBK-301 BRBK-302, BRBK-304

BRC SERIES

BRC Cameras

BRC-300 (Mfr # BR300 • B&H # SOBRC300)**CALL**

BRC-Z700 (Mfr # BRCZ700 • B&H # SOBRCZ700) ...**CALL**

BRC-H700 (Mfr # BRCH700 • B&H # SOBRCH700)**CALL**

Optional Accessories

BRBK-H700: HD Optical Multiplex Card
(Mfr # BRBKH700 • B&H # SOBRBKH700)**CALL**

BRBK-MF1: HD Optical Multiplex Card
(Mfr # BRBKMF1 • B&H # SOBRBKMF1)**1449.95**

HFBK-HD1: HD Interface Board
(Mfr # HFBKHD1 • B&H # SOHFBKHD1)**CALL**

HFBK-SD1: SD Interface Board
(Mfr # HFBKSD1 • B&H # SOHFBKSD1)**CALL**

HFBK-XG1: XGA Interface Board
(Mfr # HFBKXG1 • B&H # SOHFBKXG1)**CALL**

HFBK-TS1: i.LINK (HDV) Interface Board
(Mfr # HFBKTS1 • B&H # SOHFBKTS1)**CALL**

BRBK-HSD1: HD/SD-SDI Output Card Optical
Multiplex Card (Mfr # BRBKHDS1)**CALL**

BRBK-301: Analog RGB Component Card
(Mfr # BRBK301 • B&H # SOBRBK301)**CALL**

BRBK-302: SDI Card
(Mfr # BRBK302 • B&H # SOBRBK302)**CALL**

BRBK-303: SD Optical Multiplex Card
(Mfr # BRBK303 • B&H # SOBRBK303)**CALL**

BRBK-304: DV Card
(Mfr # BRBK304 • B&H # SOBRBK304)**CALL**

CCFC-M100HG: 328' 2-core multi-mode
optical fiber cable for BRC-H700, BRC-Z700.
(Mfr # CCFCM100HG • B&H # SOCCFCM100HG)**CALL**

CCFC-M100: 328' 2-core multi-mode optical
fiber cable for BRC-300.
(Mfr # CCFCM100 • B&H # SOCCFCM100)**CALL**

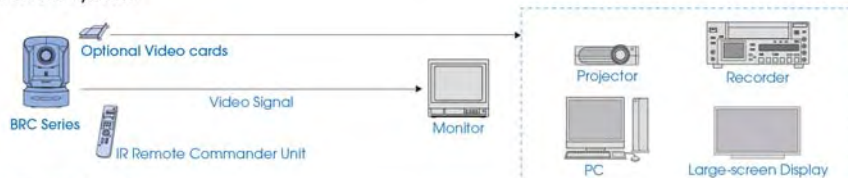
CCXC-9DBUS: 16' 9-pin D-sub to 5 BNCs (RGB,
Sync, Video) breakout cable for use with the
BRBK-301 or HFBK-SD1. (SOCCXC9DBUS)**CALL**

VCLHG0862: 0.8x wide angle conversion lens
for the BRC-Z700.
(Mfr # VCLHG0862 • B&H # SOVCLHG0862)**289.95**

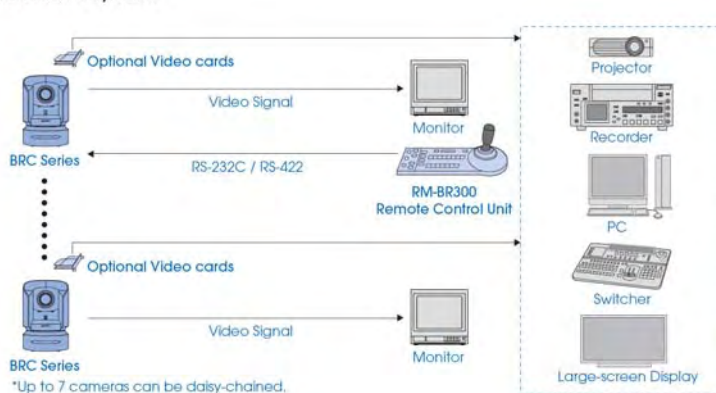


SYSTEM CONFIGURATIONS

Small Scale System



Medium-sized System



Camera	BRC-H700	BRC-Z700	BRC-300
Signal systems	1080i NTSC or Pal switchable	1080i NTSC or Pal switchable	NTSC
Image device	1/3-type IT CCD x 3	1/4-type CMOS x 3	1/4.7-type CCD x 3
Total picture elements	Approx. 1.12 Megapixels	Approx. 1.12 Megapixels	Approx. 1.07 Megapixels
Effective picture elements	Approx. 1.07 Megapixels	Approx. 1.04 Megapixels	Approx. 0.69 Megapixels
Lens (Optical / Digital)	12x / 48x Zeiss	20x / 80x Zeiss	12x / 48x
Focal length (f1.6 to f2.8)	f=4.5 to 54 mm	f=3.9 to 78 mm	f=3.6 to 43.2 mm
Lens filter diameter	72mm	62mm	37mm
Minimum object distance	500 mm (Wide), 800 mm (Tele)	10 mm (Wide, Limiter Off), 500 mm (Wide, Limiter On), 800 mm (Tele)	500 mm (Wide), 800 mm (Tele)
Horizontal viewing angle	5.5 to 60.3°	1.8 to 55.2°	4:3 mode: 3.3 to 37.8°, 16:9 mode: 4.0 to 45.4°
Pan/Tilt speed	0.25 to 60°	0.22 to 60°	0.25 to 60°
Minimum illumination	6 lx (50 IRE, F1.6, +18 dB)	6 lx (50 IRE, F1.6, +24 dB)	7 lx (25 IRE, F1.6, +18 dB)
Shutter speed	1/10,000 to 1/60 s or 1/10,000 to 1/50 s		1/10,000 to 1/4 s
Gain (Auto/Manual)	0 to 18 dB and Hyper Gain	0 to 24 dB and Hyper Gain	-3 to 18 dB
White balance	Auto/Indoor/Outdoor/ One-push/Manual	Auto1/Auto2/Indoor/ Outdoor/One-push/Manual	Auto/Indoor/Outdoor/ One-push/Manual
Image stabilizer	On/Off (Optical)	On/Off (Optical)	-
ND filter	ND1/ND2/Off	-	-
Preset positions	16	16	6
Interfaces			
HD video output	D-Sub 15 pin: Component (Y/Pb/Pr) or RGB, HD, VD or SYNC		
SD video output	-	BNC: Composite, Mini DIN 4 pin : Y/C	